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FUJI MEDICAL LASER IMAGER

FUJI NETWORK PRINT SERVER
FN-PS551
SERVICE MANUAL

Document No. 006-251-07
First Edition: Oct. 30, 1998
Revised: Oct. 28, 2002

Fuji Photo Film Co., Ltd.
Printed in Japan

This manual is intended to assist the service person in the safe and efficient servicing of the equipment described.

The equipment must be used in accordance with the procedures contained in this manual and must not be used for purposes other than those which are described herein.

The equipment should only be used by persons having recognized qualifications and if relevant having adequate training on this equipment, especially regarding protective measures such as laser radiation protection.

It is the responsibility of the user to ensure that existing legal regulations regarding installation of the building with respect to the equipment are observed. Moreover the legal regulations regarding the operation of the equipment are to be observed.

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Safety Precautions

Please note the following information regarding installation, normal usage, and servicing of the control unit (main unit and monitor). For further details, refer to the Users Guide provided with the control unit.

● Input Voltage	Set to the designated voltage of the country used in. The DELL OptiPlex GX260 series control unit model does not have a voltage selector switch (Automatic detection of voltage).
● Electric Hazard Prevention	The power cords for the control unit and monitor must be fitted with tri-core plugs and connected to properly grounded power outlet. Use only tri-core extension cords fitted with a grounding pin.
● Place of installation	Do not install in a location where dust or foreign matter can get into the computer or its various slots. Do not use near heaters or other sources of heat.

- Precautions when working on internal parts of the control unit
  1. Switch off the power to the control unit and monitor, as well as any other peripheral devices in use.
  2. To prevent electric shock, remove the power cords from the outlet.
  3. Before starting work, lightly touch the rear panel of the control unit to discharge any static electricity buildup in the body.
  4. While removing parts such as print circuit boards and memory modules, take care not to touch any of the connectors or IC pins. Keep these parts in static-proof packages.

WARNING

High voltage is used inside the CRT monitor.
To prevent electric hazards and danger, the CRT monitor internal parts cannot be accessed.
(The CRT monitor does not consist of parts servicable by the service engineer.)

Maintenance of Control Unit

For repairs and maintenance of the control unit (including the keyboard and mouse) and/or monitor of the Fuji Photo Film-supplied FN-PS551, contact the Dell service center in your country.

Fuji Network Print Server FN-PS551

Service Manual

MAINTENANCE

Control Sheet

Issue Date	Revision	Reason	Pages Affected
10/30/98	00	New release (FM2327)	All pages
05/12/99	01	Revision (Software ver. A02 / DICOM function expanded, etc.) (FM2442)	All pages
08/11/99	02	Revision (Software ver. A03 / IPU function added, support for PEI Board, etc.) (FM2567)	2~7, 9, 25, 32, 33, 41, 42, 47, 50, 51, 57, 64, 74, 75, 83, 95, 99, 103, 109, 117, 119, 121, 122, 124, 125, 174, 176, 177, 185, 196~203
03/30/2000	03	Revision (Software ver. A04/other revisions) (FM2730)	2, 3, 5~231
07/24/2000	04	Revision (Control unit (PC) discontinued, etc.) (FM2824)	3, 5, 11, 68~249
05/30/2001	05	Revision (Software ver. A05/other revisions) (FM3069)	3~6, 7, 11, 34, 35, 44, 46, 47, 58, 59, 62, 66~68, 71, 76, 77, 79~85, 89, 98~101, 110~115, 128, 136~138, 147, 150, 152, 153, 206, 209~261
12/18/2001	06	Revision (Control unit (PC) discontinued, etc.) (FM3271)	3, 5, 71, 76, 82~85, 94, 140~142, 186, 248, 251, 254, 262~279
10/28/2002	07	Revision (Software ver. A07, Control Unit (PC) discontinued, etc.) (FM3487)	2, 3, 3.1~3.4, 5, 10~12, 24, 25, 25.1~25.4, 26~29, 34, 35, 40, 48, 52, 53, 53.1~53.4, 68, 69, 71, 77, 93, 93.1~93.4, 94~97, 97.1~97.4, 140, 245~247, 254, 262, 280~297

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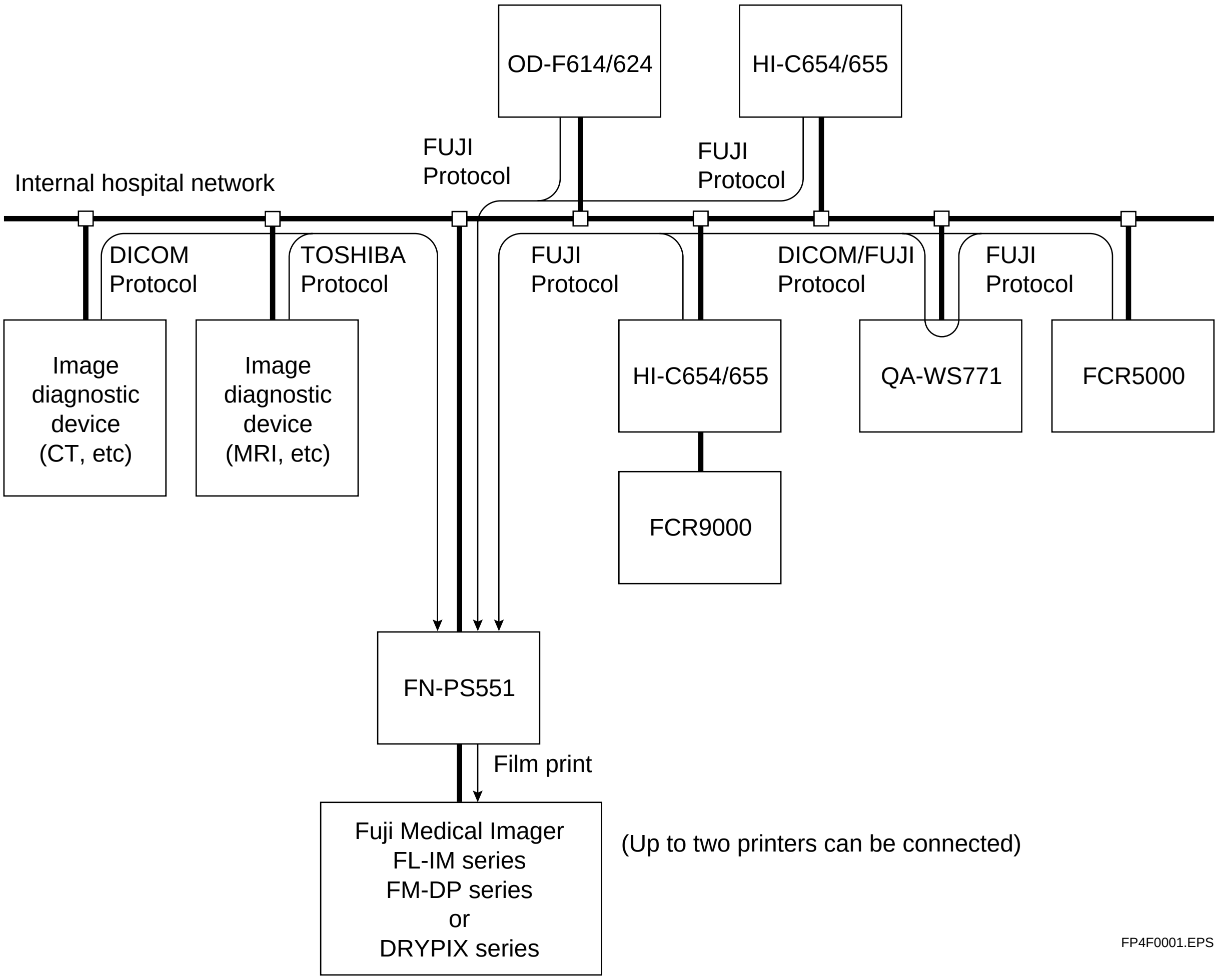
1. System Overview

The Fuji Network Printer Server FN-PS551 is a printer server system designed to enable a large number of image diagnostic devices (for IM images) such as X-ray CT and MRI systems, and Fuji Photo Film's FCR systems (for CR images; supporting software ver. A03 or later) to share one or two film printers via an internal hospital LAN.

The FN-PS551 system is characterized by the following features:

- Multi-format functions (equivalent to MF-300 series)
- Connectable to up to two laser printers or dry printers
- A single FN-PS551 system can be connected to both of the DICOM and TOSHIBA protocols as well as the Fuji Integrated Network Protocol (FINP or FUJI protocol for short; supporting software ver. A03 or later)
- Unprocessed CR images received through the FUJI protocol can be processed at the quality level equivalent to the FCR5000 series for outputting them to a printer (as network IPU function; supporting software ver. A03 or later).

■ Example of System Configuration


OD-F614/624
HI-C654/655
FUJI Protocol
FUJI Protocol
Internal hospital network
DICOM Protocol
TOSHIBA Protocol
FUJI Protocol
DICOM/FUJI Protocol
FUJI Protocol
Image diagnostic device (CT, etc)
Image diagnostic device (MRI, etc)
HI-C654/655
QA-WS771
FCR5000
FCR9000
FN-PS551
Film print
Fuji Medical Imager FL-IM series FM-DP series or DRYPIX series
(Up to two printers can be connected)
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■ Outline of Specifications

Category	**Specification**
System	Software image processing print server
Processing capacity	IM image: • Approx. 120 films/hour (512 x 512 x 8 bits, 12 frame format; based on CT/MR images) CR image (IPU function; MFP): • Approx. 160 films/hour (E-I/F board; DXA01A), approx. 225 films/hour (E-I/F board; PEI01A) (14" x 17" standard quality image, 1760 x 2140 x 10 bits, one-image format) • Approx. 75 films/hour (E-I/F board; DXA01A), approx. 100 films/hour (E-I/F board; PEI01A) (14" x 17" high quality image, 3520 x 4280 x 10 bits, one-image format) CR image (IPU function; PEM): • Approx. 65 films/hour (E-I/F board; PEI01A) (18 x 24 cm high quality image, 1770 x 2370 x 10 bits, one-image format) • Approx. 45 films/hour (E-I/F board; PEI01A) (24 x 30 cm high quality image, 2364 x 2964 x 10 bits, one-image format)
Hardware	Windows NT or XP PC (Pentium II, Pentium III or Pentium IV; 400 MHz or higher, Memory; 128 MB or more, HDD; 3.2 GB or more, CD-ROM, 3.5" FDD)
Network I/F	100BASE-TX/10BASE-T
Printer I/F	E-I/F
Compatible printers	FL-IM D, FL-IM DM, FL-IM3543 II, FL-IM2636 II, FL-IM3543N, FL-IM3543MN, FL-IM2636N, FM-DP2636, FM-DP3543, FM-DP L, DRYPIX 1000, DRYPIX 3000, DRYPIX Link Up to two printers can be connected. Mutual backup is possible when two printers are connected.
Image reception protocol	DICOM specifications (IM images, processed CR images): • DICOM Basic Grayscale Print Management (Refer to the DICOM Conformance Statement for details.) TOSHIBA specifications (IM image): • TOSHIBA network print specifications Rev. 1.2 FUJI specifications (Unprocessed CR images): • Fuji Integrated Network Protocol (FINP)
Image processing for CR image	As for FCR 5000 series • Enlargement/reduction processing • Format processing • Tonal conversion/Spatial frequency processing (GP/RP) • Dynamic range control processing (DRC) • Tomographic artifact suppression processing (TAS) • Multi-objective frequency processing (MFP) • Pattern enhancement processing for mammography (PEM) (option, support software ver. A04 or later)
Image processing for IM image	As for MF-300 series • Enlargement/reduction processing (SSM/A-VR) • Tone correction processing (BAR/SAR) • Format processing Overlay processing
Image spooling	Can spool to internal HDD
Languages	Application window display support for eight languages: English (United States) - Factory default, French (Standard or France), German (Standard or Germany), Italian (Standard or Italy), Norwegian (Bokmal), Swedish, Spanish (Modern Sort or Spain), Danish

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◆ NOTE ◆

- The FUJI specifications based image reception protocol and CR image processing support software ver. A03 or later.
- The specifications of the hardware are subject to change without notice.

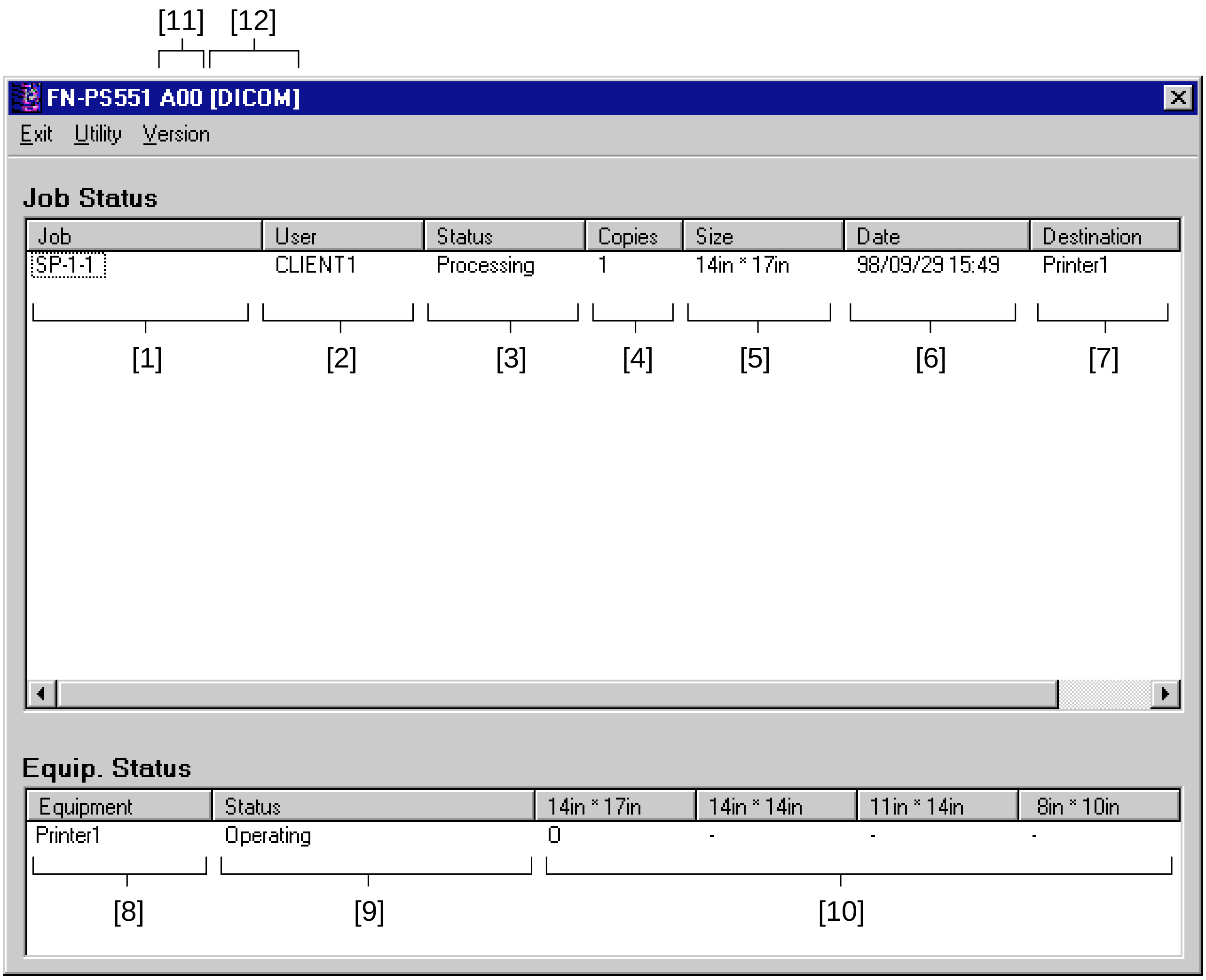
■ Normal Operation Display

The following [FN-PS551] window appears on the monitor display during normal operation of the FN-PS551.

◆ NOTE ◆

[FN-PS551] windows are shown in English as follows. To change the display to a language other than English, refer to Section 8.9, "Setting the Language for FN-PS551 Application".

→ The [FN-PS551] window displays [Job Status] and [Equip. Status].


[11]
[12]
FN-PS551 A00 [DICOM]
Exit
Utility
Version
Job Status
[1]
[2]
[3]
[4]
[5]
[6]
[7]
Equip. Status
[8]
[9]
[10]

Job	User	Status	Copies	Size	Date	Destination
SP-1-1	CLIENT1	Processing	1	14in * 17in	98/09/29 15:49	Printer1

Equipment	Status	14in * 17in	14in * 14in	11in * 14in	8in * 10in
Printer1	Operating	0	-	-	-

● Contents of Display

Job Status

[1]	Job	Job ID name of up to 15 characters. For DICOM protocol, this is the first 15 characters of the film session label. For TOSHIBA protocol and FUJI protocol, it is the first 15 characters of the patient name. (If the patient name is not provided, the ID number TOSHIBA protocol T-xxxxx, FUJI protocol F-xxxxx (xxxxx=00001 to 99999) will be automatically generated.)	
[2]	User	Name of user requesting job (for DICOM protocol, the AE Title of the remote device; for TOSHIBA protocol and FUJI protocol, host name of the remote device); maximum 8 characters.	
[3]	Status	Blank	To be processed.
		Processing	From image processing of the first film in the job through to completed processing of the last film.
		Waiting to print	From completion of image processing of all films in the job until output of the first film.
		Printing	From printing of the first film in the job to completed printing of the last film.
		Error	Error occurs in image processing.
[4]	Copies	Number of films not yet output. Number decreases with each film output.	
[5]	Size	Size of film output.	
[6]	Date	The date and time on which the print instruction was received.	
[7]	Destination	Indicates which of the two printers will be used.	

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Equip. Status

[8]	Equipment	Names of two printers; maximum eight characters each.
[9]	Status	Shows the printer status. Off line (line cannot be connected)/Operating/Film Empty/ Chemicals Empty/Receiver Full/Error/In Maintenance/ Test Mode
[10]	14in * 17in, 14in * 14in, 11in * 14in, 8in * 10in	For the film sizes that can be used, "O" appears, for the film sizes that can not be used, "-" appears. Applied film sizes: 14in * 17in: 3543 14in * 14in: 3535 11in * 14in: 2636 8in * 10in: 2025 (8in * 10in: 2025 is applicable to software ver. A05 or later.)

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Display of Title Bar

[11]	A**	Shows the version of FN-PS551 application software
[12]	[DICOM] [TOSHIBA] [IPU]	Shows active function(s) (a maximum of three functions) of FN-PS551 application. Each of the key registry software must be installed. Unless corresponding protocol(s) are set with Service Utility, the function(s) do(es) not appear (i.e. the function(s) shall not be active).

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● Print Acceptance Depending on the Status of the Printer

❍ When using software ver. A03 or earlier:

- The print from a client is not accepted with either of the DICOM/TOSHIBA/FUJI protocols until the status of the printer becomes [Operating] when the FN-PS551 application is started.
- The print acceptance varies depending on the protocol when the status of the printer is changed from [Operating] to other status while operating the FN-PS551 application after it is started up.
    - DICOM protocol: Print is accepted regardless of the status. The image data is stored in the hard disk, and the print output is performed after the status is returned to [Operating].
    - TOSHIBA and FUJI protocols: Print is only accepted in the [Operating] status.

❍ When using software ver. A04 or later:

- DICOM and FUJI protocols: The print acceptance varies depending on the settings in the [Data receive if the printer is off-line] of [DICOM Property] and [FINP Property] windows on the Service Utility.
    - Set to [enable] (DICOM protocol default setting): Print is accepted regardless of the status while starting up or operating the FN-PS551 application.
      The image data is stored in the hard disk, and the print output is performed after the status is returned to [Operating].
    - Set to [disable] (FUJI protocol default setting): Print is only accepted in the [Operating] status while starting up or operating the FN-PS551 application.
- TOSHIBA protocol: Print is only accepted in the [Operating] status while starting up or operating the FN-PS551 application.

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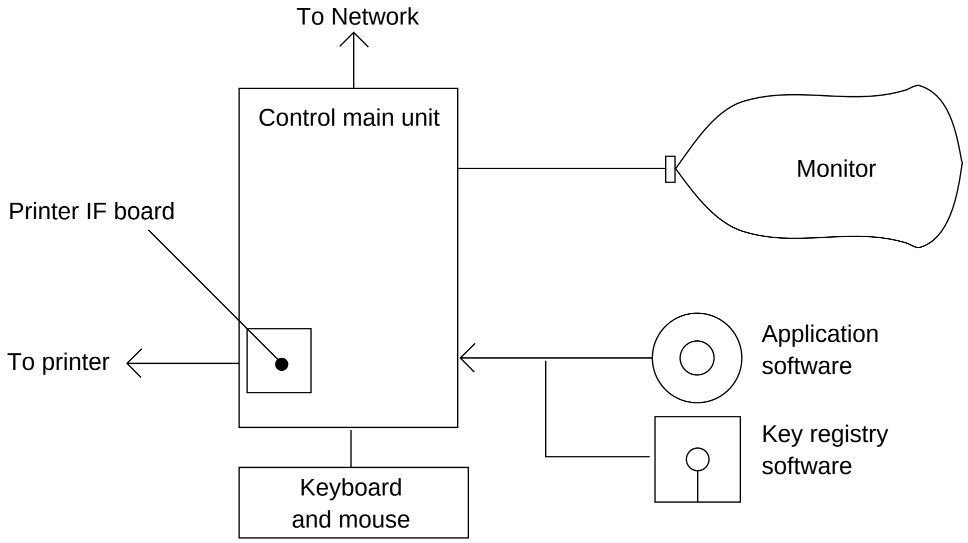
2. Basic Configuration of the FN-PS551



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■ Basic Configuration

Component	Description
Control unit	Windows NT or XP PC
Printer I/F board	E-I/F board
Monitor	15-inch CRT
Keyboard	
Mouse	
Application software	Includes all FN-PS551 functions
Key registry software	Used to enable specific FN-PS551 functions

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◆ NOTE ◆

Operations with or without the aid of the Monitor, Keyboard, and Mouse

- The system runs normally without the monitor, keyboard or mouse. Consult with the user to determine whether these components are necessary or not with reference to the table below. If determined to be unnecessary, these components may be removed.
- Even if the monitor is removed according to the user's judgement, the system will not be affected by the removal. However, it is not possible to determine the operating status of the system. It is also impossible to determine any failure even if it occurs in the control unit or the OS.
- The monitor and keyboard are required to perform service operations such as installation and maintenance of the system.
- User and service operations do not necessarily require the mouse. However, they can be performed more efficiently with the use of the mouse.

	Viewing the Operation Status	Deleting the Print Job
Monitor and keyboard connected	Enabled	Enabled
Only Monitor connected	Enabled	Disabled
Neither connected	Disabled	Disabled

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■ Detailed Specifications

● Control Unit

Item	Details
CPU	Pentium II, Pentium III, or Pentium IV 400 MHz or higher
System memory	128 MB or more
HDD	3.2 GB or more
CD-ROM drive	Built-in
3.5" FD drive	Built-in
Expansion card slots	PCI bus or ISA bus: 2 slots or more
Network	100BASE-TX/10BASE-T
Video card	Mounted on motherboard
OS	Windows NT 4.0 SP3, SP4 or SP5 Windows XP Professional (DELL OptiPlex GX260 or later)

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● Monitor

Item	Details
15-inch CRT	640 x 480 pix. or higher-resolution

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● Option

Component	Details
E-I/F board	Used in ISA or PCI bus slot in control unit; connects to Fuji printers. Up to two boards accepted.
Interface cable	

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3. Error Codes

The errors described in this chapter are recorded in log files as events on the Windows NT/XP. Information about them can be obtained through the “Event Viewer” of the Windows NT/XP administration tool.
To view events or errors recorded in the log files, refer to “4. Event Viewer”.

3.1 Source Name

The Event Viewer records a wide range of events generated by Windows NT/XP in addition to errors occurred at the FN-PS551 application.

The FN-PS551 application uses the following source names. After clicking [View] and then [Search] in the [Event Viewer], specifying one of the source names extracts and displays only necessary events.

Source Name	Function
PCPSMain	FN-PS551 overall control
TPrc	TOSHIBA protocol processing
DICOM	DICOM protocol processing
EifPrDrv	E-I/F processing
ImagePrc	Image processing
Spooler	Image spooling
ServiceUty	Service utility management

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3.2 Error Messages, Causes, and Remedies

◆ NOTE ◆

[%n%1] in the [Message] column of the following table represents a message required for error analysis.
Each message varies depending on circumstances of each error.

Source Name: PCPSMain

Event ID	Level	Message	Cause	Remedy
1	Error	PC-PS system information file access failed. %n%1	System information file access failed.	Check to see if the system settings file is intact or damaged.
2	Error	Calling 'Run' method failed. %n%1	Execute start request failed.	Restart, and/or check that the system is installed correctly.
3	Error	Calling 'RestorePrintJOB' method failed. %n%1	The restore unprocessed job request method call failed.	Restart, and/or check that the system is installed correctly.
4	Error	Calling 'SetFilmEndStatus' method failed. %n%1	The film output complete setting request method call failed.	Restart, and/or check that the system is installed correctly.
5	Error	Calling 'DoPrinterStatusChanged' method failed. %n%1	The change printer status method call failed.	Restart, and/or check that the system is installed correctly.
6	Error	Calling 'SetRawDataEndStatus' method failed. %n%1	The raw data transmission completed set request method call failed.	Restart, and/or check that the system is installed correctly.
7	Error	Calling 'SetImgPrcEndStatus' method failed. %n%1	The image processing completed setting request method call failed.	Restart, and/or check that the system is installed correctly.
8	Error	Error return on 'EndRestorePrintJOB' event. %n%1	Error returned after completion of unprocessed job restoration.	Exit FN-PS and delete all unprocessed JOB files, then restart.
9	Error	Calling 'AnsPrintCheck' method failed. %n%1	The print request availability check answer method call failed.	Restart, and/or check that the system is installed correctly.
10	Error	Calling 'ExecPrint' method failed. %n%1	The raw data transmission request method call failed.	Restart, and/or check that the system is installed correctly.
11	Error	Calling 'OnEndPrint' method failed. %n%1	Job completed notification failed.	Restart, and/or check that the system is installed correctly.
12	Error	Calling 'AnsOnPrintRequest' method failed. %n%1	The print request completed notification call failed.	Restart, and/or check that the system is installed correctly.
13	Error	Calling 'SetJOBPriority' method failed. %n%1	The change job priority request method call failed.	Restart, and/or check that the system is installed correctly.
14	Error	Calling 'DoSpool' method failed. %n%1	The job spool request method call failed.	Restart, and/or check that the system is installed correctly.
15	Error	Calling 'AnsPrinterInfo' method failed. %n%1	The printer information request answer method call failed.	Restart, and/or check that the system is installed correctly.

TP4F0009.EPS

Source Name: PCPSMain

Event ID	Level	Message	Cause	Remedy
16	Error	Calling 'GetImgPrcJOB' method failed. %n%1	The get image processing job request method call failed.	Restart, and/or check that the system is installed correctly.
17	Error	Calling 'GetRawDataJOB' method failed. %n%1	The get raw data transmission job request method call failed.	Restart, and/or check that the system is installed correctly.
18	Error	Calling 'DeleteJOB' method failed. %n%1	The delete request method call failed.	Restart, and/or check that the system is installed correctly.
19	Error	Calling 'PrinterStatusChange' method failed. %n%1	The change in printer status notification method call failed.	Restart, and/or check that the system is installed correctly.
20	Error	Calling 'ExecPrint' method failed. %n%1	The raw data transmission request method call failed.	Restart, and/or check that the system is installed correctly.
21	Error	Calling 'AnsSetPrintPriority' method failed. %n%1	The change in job priority completed method call failed.	Restart, and/or check that the system is installed correctly.
22	Error	Calling 'GetPrintJOBCount' method failed. %n%1	The number of PrintJob acquisition request method calling failed.	Restart, and/or check that the system is installed correctly.
23	Error	System setting is invalid. %n%1	System information file not set correctly.	Check that all Service Utility settings are correct.
24	Error	Printer information is not found. %n%1	Printer information cannot be found for the designated printer.	Check that printer settings in the Service Utility are correct.
25	Error	Calling 'ExeImageProcess' method failed. %n%1	The image processing request method call failed.	Restart, and/or check that the system is installed correctly.
26	Warning	Hard disk is full. %n%1	No open space on disk.	Stop image input. Start again after all print processing is completed.
27	Error	Calling 'PrintJOBMake' method failed. %n%1	The PrintJob creation request calling failed.	Restart, and/or check that the system is installed correctly.
28	Error	File copy error. %n%1	File copying error.	Restart, and/or check that the system is installed correctly.

TP4F0010.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
1	Warning	(Resource error)Hard disk is full.	Not enough space on the HDD.	Suspend transmission to connected devices and wait until space appears on the HDD. Check that the memory size per film is correctly set in the Service Utility.
2	Warning	(Resource error)Hard disk is full.	The HDD is full.	Suspend transmission to connected devices and wait until space appears on the HDD. Check that the memory size per film is correctly set in the Service Utility.
3	Warning	(Information)Print request could not accepted (shutdown process in progress).	Data was transmitted from the other device during shutdown.	The fact that transmission from other device occurred is recorded in the log, but output processing does not take place. Restart the system and send the image(s) again.
4	Warning	(Information)There is no film.	Data was received, but there is no film in the FL -IM.	The FL-IM status code is displayed in the status column, and the fact that transmission from other device occurred is recorded in the log, but output processing does not take place.
5	Warning	(Information)There is no chemical.	Data was received, but there is no chemical in the FL-IM.	The FL-IM status code is displayed in the status column, and the fact that transmission from other device occurred is recorded in the log, but output processing does not take place.
6	Warning	(Information)Laser Printer is not available.	Data was received, but the FL-IM is temporarily disabled.	The FL-IM status code is displayed in the status column, and the fact that transmission from other device occurred is recorded in the log, but output processing does not take place.
7	Warning	(Information)Laser Printer is not available.	Data was received, but the FL-IM is unusable due to fatal error.	The FL-IM status code is displayed in the status column, and the fact that transmission from other device occurred is recorded in the log, but output processing does not take place.
10	Warning	(Illegal input data)Image set ID is invalid.	The message set ID in the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.

TP4F0011.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
11	Warning	(Illegal input data)Image position ID is invalid.	The page set ID for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
12	Warning	(Internal process error) Deleting image was failed.	An attempt to delete temporarily stored image failed.	Check the HDD.
14	Warning	(Resource error)Allocating memory was failed.	An attempt to allocate memory failed.	Restart.
15	Warning	(Internal process error)Error occurred with creating thread(TTx).	An attempt to launch a sub-process failed.	Restart.
16	Warning	(Internal process error)Error occurred with creating Print JOB.	An attempt to create a print request failed.	Restart.
17	Warning	(Internal process error)Error occurred with saving Print JOB in Hard Disk.	Unable to save print request to HDD.	Restart.
18	Warning	(Internal process error)Error occurred with requesting to print.	Unable to generate print command.	Restart.
19	Warning	(Internal process error)Error occurred with creating Film Object.	Unable to create film information.	Restart.
20	Warning	(Internal process error)Error occurred with saving Film Object to Hard Disk.	Unable to save film information to HDD.	Restart.
21	Warning	(Internal process error)No entry in configuration file.	No settings file.	Reset configuration using Service Utility.
31	Warning	(System error) My host name could not be resolved.	Unable to acquire host name.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
32	Warning	(System error) Network information could not be resolved.	Unable to acquire network information.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)

TP4F0012.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
33	Warning	(Network error)Error occurred in socket level.	A socket error occurred.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
34	Warning	(Network error)Error occurred in socket option.	A socket option error occurred.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
35	Warning	(Network error)Error occurred in Bind state.	A bind error occurred.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
36	Warning	(Network error)Error occurred in Listen state.	A listen error occurred.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
37	Warning	(Network error)Error occurred in Accept state.	An accept error occurred.	Check network cable connections. If OK, check host name for this FN-PS and network settings in Network menu of Control Panels. (If the problem seems to be with the other device at the connection end, check the settings at the other device.)
38	Warning	(Internal process error)Error occurred with creating thread.	A fork error occurred in a sub-process.	Restart.
39	Warning	(Network error)Error occurred in socket control.	A socket control error occurred.	Restart.

TP4F0013.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
40	Warning	(Network error)Error occurred in initializing WSA.	A WSA control error occurred.	Restart.
61	Warning	(Illegal input data)There is no information for printing.	The received image does not contain enough information.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
62	Warning	(Illegal input data)Exposure conditions is invalid.	Exposure conditions for the receive image are incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
63	Warning	(Illegal input data)Film size is invalid.	The film size for the received image is not designated correctly.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
64	Warning	(Illegal input data)Rows of image is out of limitation.	The image size (rows) for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
65	Warning	(Illegal input data)Columns of image is out of limitation.	The image size (columns) for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
66	Warning	(Illegal input data)Allocated bit is invalid.	The allocated bit for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
67	Warning	(Illegal input data)Stored bit is invalid.	The stored bit for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
68	Warning	(Illegal input data)High bit is invalid.	The high bit for the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
69	Warning	(Illegal input data)Rows of overlay are out of limitation.	The overlay size (rows) of the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
70	Warning	(Illegal input data)Columns of overlay is out of limitation.	The overlay size (columns) of the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.

TP4F0014.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
71	Warning	(Illegal input data)Origin of overlay is out limitation.	The overlay origin position of the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
72	Warning	(Illegal input data)Window information is invalid.	The window processing of the received image is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
73	Warning	(System error)Film base density is invalid.	Film base colour specification error.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
74	Warning	(Illegal input data)Size of overlay data is invalid.	Overlay data size error.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
75	Warning	(Illegal input data)Size of image data is invalid.	Image data size error.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
76	Warning	(Illegal input data)Image information is invalid.	The image information is incorrect.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
77	Warning	(Internal process error)Error occurred with image processing.(Window)	An error occurred in window level processing.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
78	Warning	(Network error)Error occurred with TCP/IP communication.	A fault occurred during file transmission.	Check network cable connections. If OK, check host name for other device and network settings in the Client menu of the Service Utility. (If the problem seems to be with the other device at the connection end, check settings at the other device.)
79	Warning	(Resource error)Allocating memory was failed.	An attempt to allocate memory failed.	Restart.
80	Warning	(Network error)Error occurred in sending data.	An error occurred during data transmission.	Check the other device and network cabling.
81	Warning	(Network error)Error occurred in receiving data.	An error occurred during data reception.	Check the other device and network cabling.
82	Warning	(Network error)Timeout occurred in sending data.	A timeout occurred during data transmission.	Check the other device and network cabling.
83	Warning	(Network error)Timeout occurred in receiving data.	A timeout occurred during data reception.	Check the other device and network cabling.

TP4F0015.EPS

Source Name: TPrc

Event ID	Level	Message	Cause	Remedy
84	Warning	(Network error) Receiving data was aborted.	An abort data reception request was received from the other device.	Check the other device.
85	Warning	(Network error) Sending data was aborted.	Data transmission was aborted.	Check the other device.
86	Warning	(Internal process error) Error occurred with creating thread(TPS).	An attempt to launch a sub-process failed.	Restart.
87	Warning	(Internal process error) Error occurred with creating thread(TPR).	An attempt to launch a sub-process failed.	Restart.
88	Warning	(Illegal input data) Data size was too long, and overflow buffer.	The image data was too long to be received.	Check the other device.
89	Warning	(Network error) ABOR command was sent.	An abort request was received from the other device.	Check the other device.
91	Warning	(Interface error) Timeout occurred with sending each images.	A timeout occurred in transmission between frames.	Check that the Transmission Time Between Frames setting at the other device is the same as the Timeout Between Stores setting in the Protocols menu of the Service Utility.
92	Warning	(Interface error) Timeout occurred with FTP.	A timeout occurred in the FTP service.	Check the status of the other device, the operation at the time of transmission, and the transmitted images.
93	Warning	(Internal process error) Error occurred with accessing image information file.	An image information file access error occurred.	Check the HDD.
94	Warning	(Internal process error) Error occurred with accessing image file.	An image data file access error occurred.	Check the HDD.
95	Warning	(Internal process error) Error occurred with accessing overlay file.	An overlay file access error occurred.	Check the HDD.
99	Warning	(Internal process error) Unknown error occurred.	An other type of error occurred.	Restart.

TP4F0016.EPS

Source Name: DICOM

Event ID	Level	Message	Cause	Remedy
1	Error	Initialization failed.[DPM Invoke fail]	Unable to launch the DICOM main thread.	Restart, and/or check that the system is installed correctly.
2	Error	Initialization failed.[Invalid DICOM.dat]	The DICOM protocol settings are invalid.	Reset the DICOM protocol settings using the Service Utility.
3	Error	Initialization failed.[DPC Invoke fail]	Unable to launch DICOM receive main thread (wait port number disabled).	Change the DICOM protocol port number using the Service Utility.
4	Error	Initialization failed.[Insufficient memory]	Memory was insufficient during the DICOM initialization procedure.	Restart, and/or check that the system is installed correctly.

TP4F0017.EPS

Source Name: EifPrDrv

Event ID	Level	Message	Cause	Remedy
1	Error	System call has failed. %n%1	A system call error occurred.	Restart, and/or check that the system is installed correctly.
2	Error	SMCU Driver error. %n%1	An error occurred in SMCU driver operation.	Restart, and/or check that the system is installed correctly.
3	Error	EIFIMG Driver error. %n%1	An error occurred in EIFIMG driver operation.	Restart, and/or check that the system is installed correctly.
4	Error	Received unexpected command. %n%1	An unsupported command was received from the printer.	Restart, and/or check that the system is installed correctly.
5	Error	Unable to setup timers. %n%1	An attempt to set timer settings failed.	Restart, and/or check that the system is installed correctly.

TP4F0018.EPS

Source Name: ImagePr

Event ID	Level	Message	Cause	Remedy
1	Error	System call has failed. %n%1	A system call error occurred.	Restart, and/or check that the system is installed correctly.
2	Error	Unable to get system memory. %n%1	An attempt to acquire system memory failed.	Restart, and/or check that the system is installed correctly.
3	Error	Unable to create image processing object. %n%1	An attempt to create an image processing object failed.	Restart, and/or check that the system is installed correctly.
4	Error	Unable to get image processing parameter. %n%1	An attempt to obtain either the print job or film object, or the image processing parameters failed.	Check that the print job and the film objects and the image processing parameters are set correctly.
5	Error	File operation error. %n%1	An attempt to create or open a file failed.	Check that the designed file is present. Check that the print job and film objects and the image processing parameters are set correctly. Restart, and/or check that the system is installed correctly.
6	Error	Image processing error. %n%1	All attempts at image processing result in error.	Check that the print job and the film objects and the image processing parameters are set correctly.

TP4F0019.EPS

Source Name: Spooler

Event ID	Level	Message	Cause	Remedy
1	Error	Error occurred with creating thread. %n%1	Thread creation failed (internal error).	Restart, and/or check that the system is installed correctly.
2	Warning	Error occurred with posting message to thread. %n%1	Message transmission failed (internal error).	Memory and/or resources may be insufficient. Quit other open applications.
3	Warning	Insufficient memory. %n%1	An attempt to obtain memory failed (internal error).	Memory and/or resources may be insufficient. Quit other open applications.
4	Warning	Creation of PrintJob dispatch driver failed. %n%1	An attempt to create a Print job object when an unprocessed job was restored failed.	The print information file may be damaged, or the associated film information file may be missing.
5	Warning	PrintJob file read failed. %n%1	An attempt to read a print job file failed.	The print information file may be damaged, or the associated film information file may be missing.
6	Warning	Item size is invalid. %n%1	The data size for the print job or film object is invalid.	Check the print job and film object data.
7	Warning	Getting to item data failed.	Print job or film object data acquisition failed.	Check the print job and film object data.
8	Warning	Addition of spooler queue failed. %n%1	An attempt to register in the spooler queue failed.	Check the print job priority.
9	Warning	Film Object is invalid. %n%1	Either the film object is invalid or there is insufficient data.	Check the contents of the film object.
10	Warning	Deleting raw file was failed. %n%1	An attempt to delete a raw data file failed.	Check to see if the raw data file is being accessed by another device.
11	Warning	Status was invalid. %n%1	The status of this FN-PS itself is invalid.	It quit although there was no startup request. A different request came although it was not running.
12	Warning	PrintJob dispatch pointer is invalid. %n%1	A print job access attempt failed.	Check to see if print job data has already been deleted.
13	Warning	Film Object Number is invalid. %n%1	The designated film number is invalid.	Check the method parameters for film object access.
14	Warning	PrintJob was not found for Deleting. %n%1	The print job nominated in the queue delete request was not found.	Check the method parameters for the queue delete request.
15	Warning	Printer information was not found. %n%1	Printer information for the nominated printer was not found.	Check the printer designated in the print job.
16	Warning	Change priority is invalid. %n%1	The designated priority change is not valid.	Check the method parameters for the priority change.

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Source Name: ServiceUty

Event ID	Level	Message	Cause	Remedy
1	Information	Start the PC-PS Service Utility.	The Service Utility started up. (This event is recorded when the Service Utility is started up.)	If the Service Utility may have been started up by non-service personnel, check all settings.

TP4F0021.EPS

4. Event Viewer

4.1 Using the Event Viewer

Various events that occur during Windows NT/XP operation are recorded (or logged) in the [Event Viewer] if used. Information such as resource information and a system operation status is included in each event. If an error occurs, the following logs can be used to trace the cause of the error.

■ Event Viewer Functions

● System Log:

The system log contains events logged by the various Windows NT/XP components. For example, if a system component such as a driver fails to load at startup, the corresponding event is recorded in the system log.

● Security Log:

The security log contains security events. Security events are used to monitor changes to the security system and detect acts of invading it. The security log records valid and invalid log-on attempts as well as resource usage events (creation, open or deletion of files).

● Application Log:

The application log contains specific events logged by the FN-PS551 application. The application developer determines which events to be monitored.

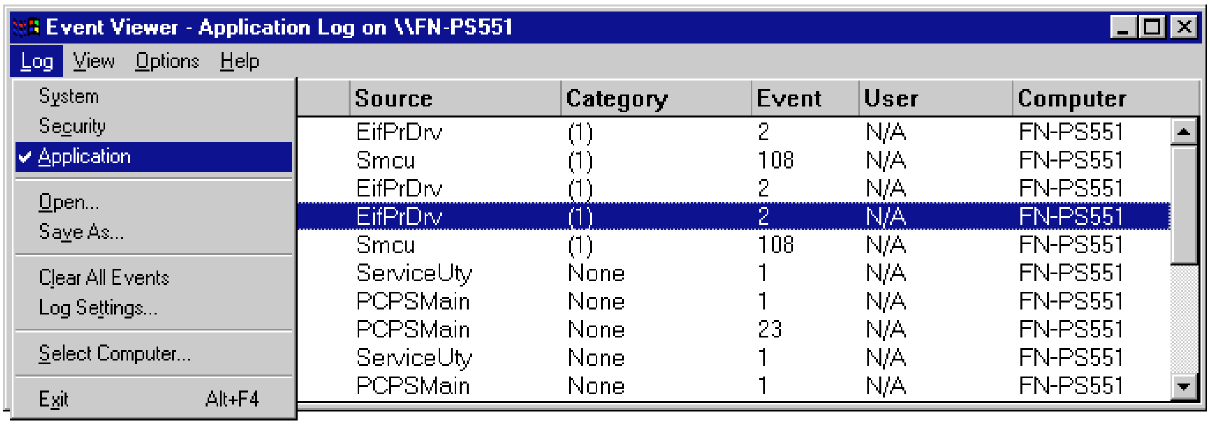
Errors occurring in the FN-PS551 application are recorded in the application log. The following procedure describes how to display the application log.

- For Windows NT

Click the [Log] menu on the [Event Viewer] window, then click [Applications].

◆ REFERENCE ◆

The following screen displays show the case for Windows NT, however, they are similar in the case of Windows XP as well.


Event Viewer - Application Log on \\FN-PS551
Log
View
Options
Help
System
Security
✓ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4

Source	Category	Event	User	Computer
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551
PCPSMain	None	23	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551

- For Windows XP

Click [Application] in the Event Viewer Tree on the left side of the [Event Viewer] window.

■ Starting Event Viewer

● For Windows NT

(1) From the [Start] menu on the Windows desktop, click [Program].

(2) Then click [Event Viewer] on the [Administrative Tools (Common)] .
→ The Event Viewer starts, and the [Event Viewer] window appears.

● For Windows XP

(1) From the [Start] menu on the Windows desktop, click the [Control panel].

(2) From the [Control panel] window, click the [Performance and Maintenance].

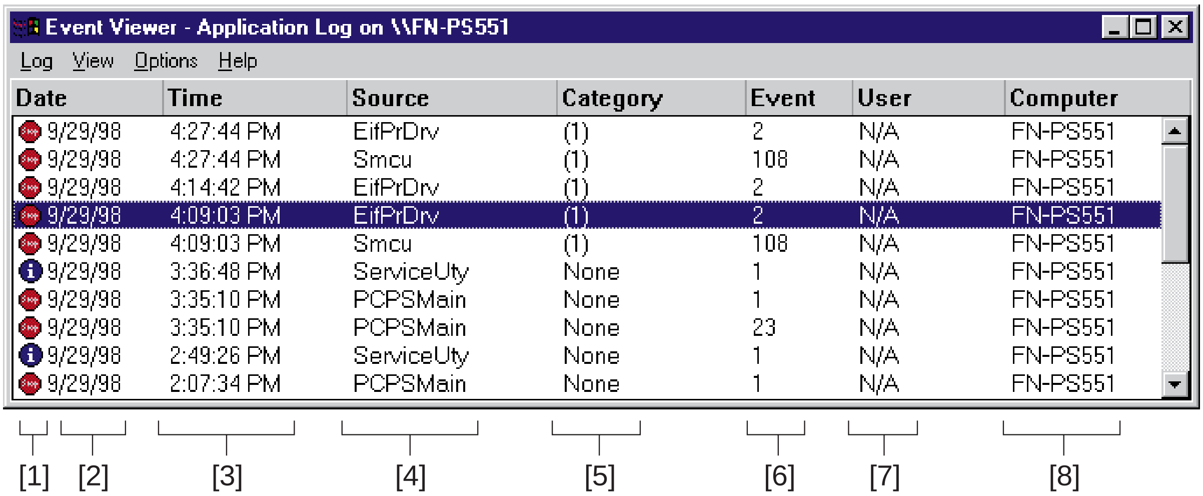
(3) From the [Performance and Maintenance] window, click the [Administrative Tools].

(4) From the [Administrative Tools] window, double-click the [Event Viewer].
→ The Event Viewer starts, and the [Event Viewer] window appears.

■ Layout and View of Event Viewer Window

◆ REFERENCE ◆

The following screen displays show the case for Windows NT, however, they are similar in the case of Windows XP as well.



Date	Time	Source	Category	Event	User	Computer
⛔ 9/29/98	4:27:44 PM	EifPrDrv	(1)	2	N/A	FN-PS551
⛔ 9/29/98	4:27:44 PM	Smcu	(1)	108	N/A	FN-PS551
⛔ 9/29/98	4:14:42 PM	EifPrDrv	(1)	2	N/A	FN-PS551
⛔ 9/29/98	4:09:03 PM	EifPrDrv	(1)	2	N/A	FN-PS551
⛔ 9/29/98	4:09:03 PM	Smcu	(1)	108	N/A	FN-PS551
ℹ 9/29/98	3:36:48 PM	ServiceUty	None	1	N/A	FN-PS551
⛔ 9/29/98	3:35:10 PM	PCPSMain	None	1	N/A	FN-PS551
⛔ 9/29/98	3:35:10 PM	PCPSMain	None	23	N/A	FN-PS551
ℹ 9/29/98	2:49:26 PM	ServiceUty	None	1	N/A	FN-PS551
⛔ 9/29/98	2:07:34 PM	PCPSMain	None	1	N/A	FN-PS551

[1] Icons

Icon (NT)	Icon (XP)	Meaning	Details
STOP	⊗	Error	Indicates a critical error such as startup failure in device driver or service, or loss of data.
ⓘ	ⓘ	Information	Indicates that the system has started up normally (including service startup and remote access).
ⓘ	⚠	Warning	Suggests the possible cause of errors when they occur. Normally kept in the log.

TP4F0022.EPS

[2] [Date] : The date on which the event occurred.

[3] [Time] : The time at which the event occurred.

[4] [Source] : The application responsible for writing the event.

[5] [Category] : The event category.

[6] [Event] : The event identifier number.

[7] [User] : The name of the user logged in before the event occurred. Where the relevant software dose not identify user names, the [User] column reads “N/A”.

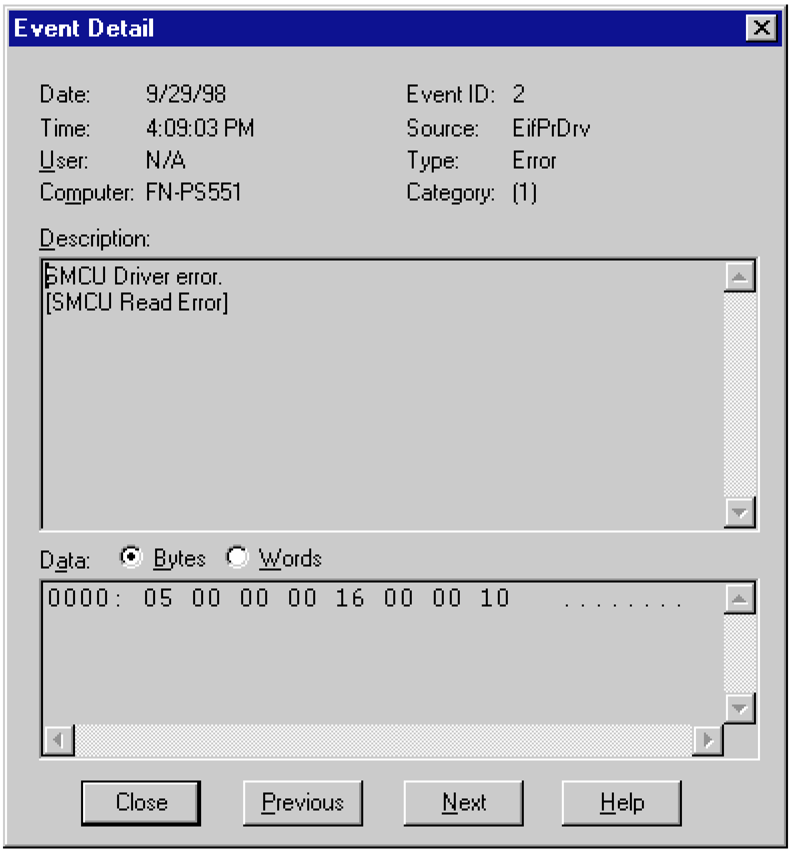
[8] [Computer] : The name of the computer in use when the event occurred.

4.2 Details of Event

On the Log list in the [Event Viewer] window, position the pointer in the log of which event detail to be viewed and double-click the mouse button. The [Event Detail] window appears. To close the [Event Detail] window, click [Close] on the window or clicking the close box ☒ in the top right-hand corner of the window.

◆ **REFERENCE** ◆

The following screen displays show the case for Windows NT, however, they are similar in the case of Windows XP as well. However, [Event Detail] is displayed as [Event Properties].



Date: 9/29/98
Time: 4:09:03 PM
User: N/A
Computer: FN-PS551
Event ID: 2
Source: EifPrDrv
Type: Error
Category: (1)

Description:

```
SMCU Driver error.
[SMCU Read Error]
```

Data: ● Bytes ○ Words

```
0000: 05 00 00 00 16 00 00 10    ........
```

■ View of the Window

- [Description:] : Describes logged events.
- [Data:] : Shows event locations in bytes or words.

◆ **REFERENCE** ◆

For further information about [Date:], [Time:], [User:], [Computer:], [Event ID:], [Source:], [Type:], and [Category:], refer to the " ■ Layout and View of Event Viewer Window" in the section "4.1 Using the Event Viewer". Note that [Type] corresponds to the meaning of an icon and [Event ID] to the identifier number of an event.

4.3 Saving Event Logs

The following procedure describes how to save event logs for further analysis.

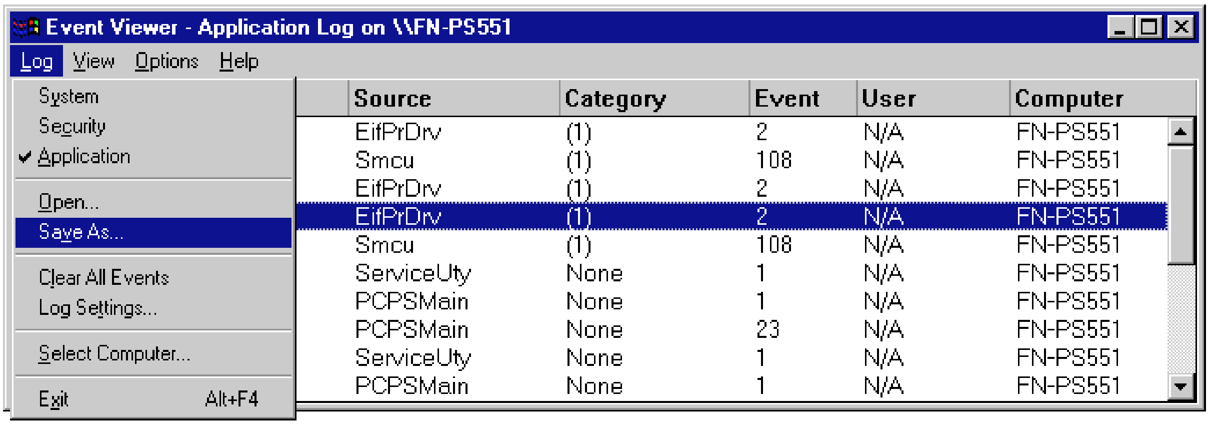
◆ NOTE ◆

Before proceeding with this procedure, get ready a floppy disk (DOS formatted) for saving event logs.

- For Windows NT

(1) Insert the floppy disk for saving event logs into the disk drive.

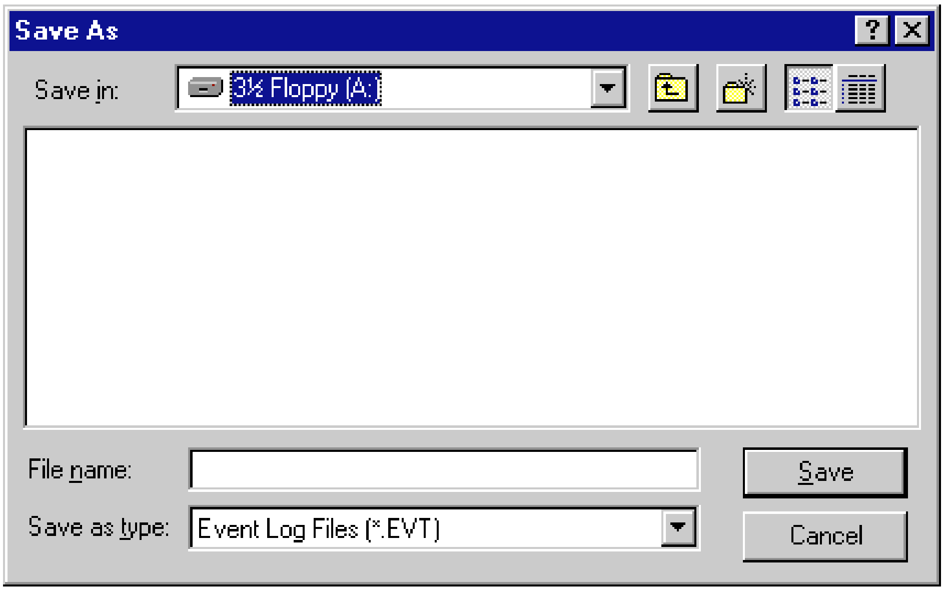
(2) From the [Log] menu, click [Save As...].


Event Viewer - Application Log on \\FN-PS551
Log
View
Options
Help
System
Security
✓ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4

Source	Category	Event	User	Computer
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551
PCPSMain	None	23	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551

→ The [Save As...] dialog appears.

(3) In the [Save in:] box, choose “3 1/2 Floppy (A:)”.

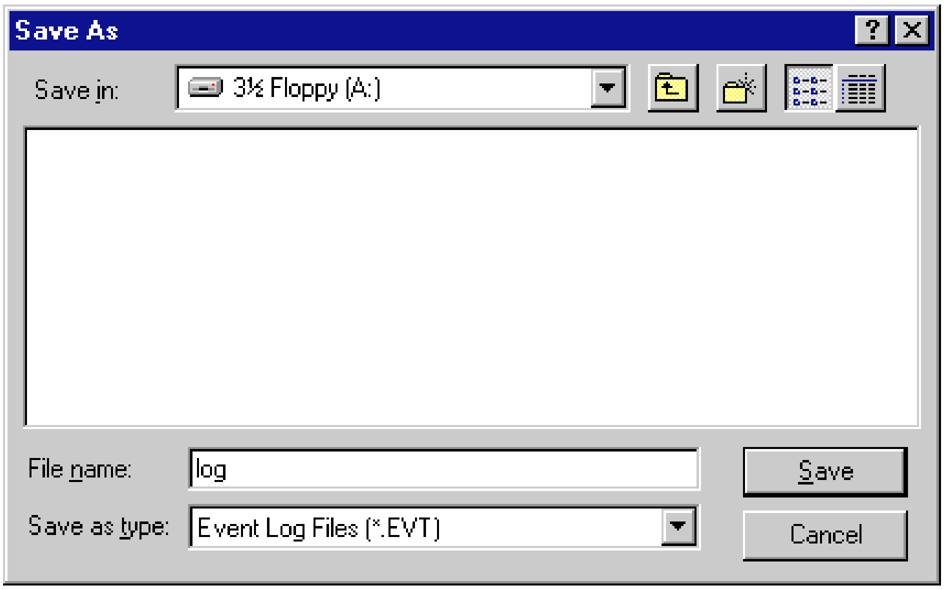

Save As
Save
Cancel

Save in: 3½ Floppy (A:)

File name:

Save as type: Event Log Files (*.EVT)

(4) In the [File name:] box, enter a file name (e.g., “log”), then click [Save].



File name: log

Save as type: Event Log Files (*.EVT)

→ The [Save As...] dialog disappears once the save operation has been successfully completed.

(5) Remove the floppy disk after checking that the access lamp on the floppy disk drive has gone out.

- For Windows XP

(1) Insert the floppy disk for saving event logs into the disk drive.

(2) From the [Action] menu, click [Save Log File As...].
→ The [Save “Application” As] dialog appears.

(3) In the [Save in:] box, choose “3 1/2 Floppy (A:)”.

(4) In the [File name:] box, enter a file name (e.g., “log”), then click [Save].
→ The [Save “Application” As] dialog disappears once the save operation has been successfully completed.

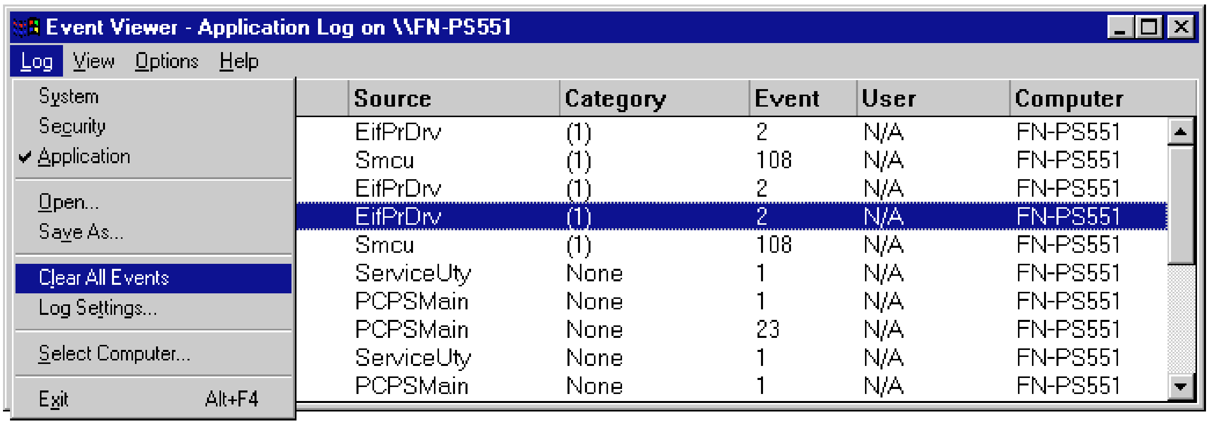
(5) Remove the floppy disk after checking that the access lamp on the floppy disk drive has gone out.

4.4 Deleting Event Logs

The log files that can be referred to through the event viewer are normally updated according to the values entered by the [Event Log settings] command in the case of Windows NT and by [Properties] on the [Action] menu in the case of Windows XP. The following procedure is taken to clear the content of all log files.

- For Windows NT

(1) From the [Log] menu, click [Clear All Events].


Event Viewer - Application Log on \\FN-PS551
Log
View
Options
Help
System
Security
✓ Application
Open...
Save As...
Clear All Events
Log Settings...
Select Computer...
Exit Alt+F4

Source	Category	Event	User	Computer
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
EifPrDrv	(1)	2	N/A	FN-PS551
Smcu	(1)	108	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551
PCPSMain	None	23	N/A	FN-PS551
ServiceUty	None	1	N/A	FN-PS551
PCPSMain	None	1	N/A	FN-PS551

→ The message [Do you want to save this event log before clearing it ?] appears prompting to enter a Yes or No.

(2) Click [No] to proceed without saving event logs.

→ The [Clear Event Log] alert appears.

(3) Click [Yes] to proceed.

→ All log entries on the [Event Viewer] window are cleared.

- For Windows XP

(1) From the [Action] menu, click [Clear All Events].

→ The message [Do you want to save “Application log” before clearing it ?] appears prompting to enter a Yes or No.

(2) Click [No] to proceed without saving event logs.

→ All log entries on the [Event Viewer] window are cleared.

4.5 Quitting the Event Viewer

For Windows NT, from the [Log] menu, click [Exit] to exit from the event viewer.
For Windows XP, from the [File] menu, click [Exit] to exit from the event viewer.

→ The [Event Viewer] window closes, and the event viewer is terminated.

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5. Replacements

5.1 Procedure for Replacing

- In the event of a breakdown in the control unit (including the keyboard and mouse) or monitor, refer to the User’s Guide provided with the control unit and monitor and any other relevant documentation. For futher advice and/or repairs, contact the DELL service center in your country.

- All maintenance parts for the FN-PS551 made available through Fuji Photo Film are listed in the following section “6. Service Parts List”.

- The following procedure describes how to install and replace the printer interface board.

● Overview of produre for replacing the printer interface board

(1) Setting of printer interface board
(2) Switch off the power to the control unit (PC)
(3) Disconnect all cables
(4) Remove the floor stand
(5) Remove the cover from the control unit (PC)
(6) Remove the expansion card cage
(7) Replace/insert the printer interface board
(8) Reinstall the expantion card cage
(9) Re-attach the control unit cover
(10) Re-attach the floor stand
(11) Reconnect the cables
(12) Switch the power back on to the control unit (PC)

◆ NOTE ◆

To install additional printer interface board (i.e., add a connected printer), performthe following additional step.

(13) Set configuration for additional printer

◆ NOTE ◆

Steps (1) through (12) are described in greater detail in the following section of the “FN-PS551 Service Manual-Installation”.

- 2.4 Printer Interface Board Settings
- 2.5 Installing the Printer Interface Board
- 2.6 Attaching the Floor Stand
- 2.7 Connecting Cables

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6. Service Parts List

6.1 How to Use the Service Parts List

■ RANK

- Handing RANK Characters (parts that are handled in a special manner during parts operation, such as replacement) It is assigned only to applicable parts.

Character	Under Warranty	Out of Warranty
R	Must be returned.	Repairable
Q	Must be returned. (We use for analysis)	Not repairable
T	Must not be returned. (Consumable part. Not applicable for free on charge)	Not repairable
Without R, Q, T	MustNot be returned.	Not repairable

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- Export Regulation-Applicable Character

  It is assigned only to applicable parts. (Parts without the following character are not controlled by Export regulation.)

Character	Description
+	Parts applicable to Export regulations.

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- Fault RANK Characters (which provide reference for determining the recommended stock quantity)
  All parts are assigned either A through E.

Character	Description
A	Consumable parts or parts that will be replaced at short intervals.
B	Parts that may become faulty accidentally and have a relatively high failure rate.
C	Parts that have a sufficiently long MTBF, but are expected to have a relatively high failure rate.
D	Parts that have a sufficiently long MTBF, but are expected to become faulty.
E	Parts that are necessary for fault analysis or parts that may be needed in case of unexpected accidents such as man-induced damage.

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<The RANK Guide>
The Fault RANK characters, Handling RANK characters, and Export regulation-applicable characters are assigned in that order.
Thus, at least one character or up to three characters are assigned in the RANK column.

■ REF. NO.

REF. NO. is a parts number indicated in the Service Parts Exploded Views. If REF. NO. contains any decimal fraction, its integer portion corresponds to the parts number shown in the Exploded Views, while its decimal (s) are used to identify the function of the part. For parts having different functions, they are clearly distinguished in the REMARKS and SERIAL NUMBER columns.

■ PART NUMBER

PART NUMBER is a code number that is unique to each parts.
An alphabetic letter at the right-most position of the code number has the following meaning.

- For Hardware

  The alphabet denotes the version number of a part. If parts have different version numbers, they are upward-compatible.

- For Software

  The alphabet denotes a difference in the specifications.

■ PART NAME

PART NAME represents a general name of a part.

■ QTY.

- QTY. represents the quantity of parts used in each unit.

- When the quantity value for a particular part is with the suffix “-S”, it means that the part is to be issued in packs of 50.

  (Even when the ordered quantity is 1, a bag containing 50 pieces will be supplied.)

■ REMARKS

The REMARKS column indicates an unique name of a part of its relevant information of note.

■ SERIAL NUMBER

The units may contain different parts depending on their shipment control number. SERIAL NUMBER indicates the shipment control number to which the relevant parts are applicable. If the SERIAL NUMBER column is blank, the parts are appliccable to all the relevant units.The shipment control number is represented by lower four digits of the seven-digit number indicated on the ratings name plate.

■ Recommended Quantity of Spare Parts

It is recommended as a rough guide to hold in stock a certain quantity of parts according to the rank (A, B, C, D, E) assigned to the parts, as follows. For periodically replaced parts, hold them in stock separately.
Adjust the stock quantity of service parts depending on the number of working units (N).
Quantity used in a single system: Q.

- $N = 1$

  RANK A = $1 + Q \times 0.3$
  RANK C = $1 + Q \times 0.05$
  RANK D = $1 + Q \times 0.02$

- $2 \leq N \leq 10$

  RANK A = $2 + N \times Q \times 0.3$
  RANK C = $2 + N \times Q \times 0.05$
  RANK D = $1 + N \times Q \times 0.02$

- $11 \leq N \leq 300$

  RANK A = $3 + N \times Q \times 0.3$
  RANK C = $3 + N \times Q \times 0.05$
  RANK D = $2 + N \times Q \times 0.02$

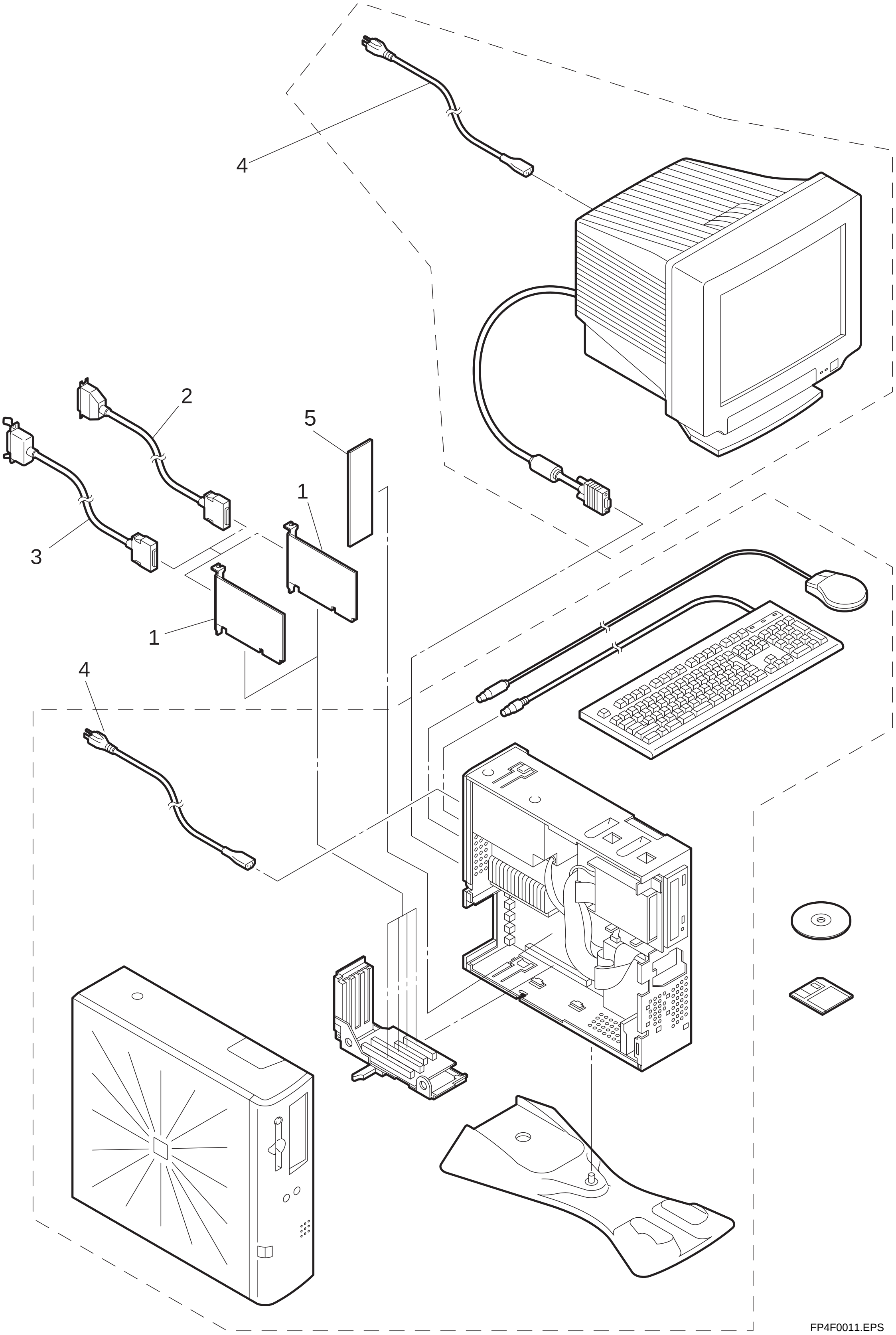
■ Precautions to be Observed when Returning Parts in Need of Repair

When returning parts in need of repair, pack them in the same manner as for the supplied substitutes, using the substitute packing materials.
The use of different packing materials or packing methods may incur damage to packed parts during transit.

6.2 Parts List

◆ **NOTE** ◆

The diagram shown below is an example of parts appearance. Appearance varies depending on the control unit model used.



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RANK	REF.	PART NUMBER	PART NAME	QTY.	REMARKS	SERIAL NUMBER
CR	1.1	113Y1312D	DXA01A	1 to 2	E-I/F Printer Interface Board for ISA Bus	
	1.2	113Y1405B	PEI01A	1 to 2	E-I/F Printer Interface Board for PCI Bus	
E	2.1	136Y5869A	Cable	1 to 2	E-I/F Printer Interface Cable 5 m	
	2.2	136Y5870A	Cable	1 to 2	E-I/F Printer Interface Cable 15 m	
	2.3	136Y5871A	Cable	1 to 2	E-I/F Printer Interface Cable 30 m	
	2.4	136Y5872A	Cable	1 to 2	E-I/F Printer Interface Cable 45 m	
	2.5	136Y5873A	Cable	1 to 2	E-I/F Printer Interface Cable 60 m	
	2.6	136Y5874A	Cable	1 to 2	E-I/F Printer Interface Cable 100 m	
	2.7	136Y5875A	Cable	1 to 2	E-I/F Printer Interface Cable 150 m	
E	3	136Y5868A	Cable	1 to 2	E-I/F Printer Interface Adapter Cable 1.2 m	
E	4.1	136N0119	Cable	1 to 2	Power Cable (for EU 220 V AC)	
	4.2	136N0208	Cable	1 to 2	Power Cable (for U.K. 240 V AC)	
C	5	113Y1583A	DIM08A	1	Expanded Memory (128MB for GX110/GX150)	

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◆ NOTE ◆

The FN-PS551 application software products (CD-ROM) and DICOM or TOSHIBA or IPU or PEM key registry software products (floppy disk) must be ordered.
Refer to the Product Components list in “2.3 Checking Contents” of the “Service Manual-Installation”.

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7. Service Utility

The service utility is used to install the system, troubleshoot connection problems to access to image diagnostic devices and printers, and add functions after installation. The service utility checks, sets and changes each parameter as required.

7.1 Starting Up and Exiting the Service Utility

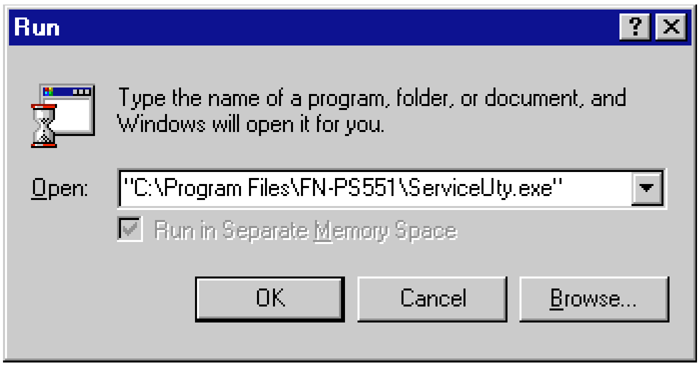
■ Starting Up the Service Utility

(1) If the FN-PS551 application is running, click [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window to close it.

(2) Click the [Start] menu on the Windows desktop, and click [Run] from the listed menu.

→ The [Run] dialog appears.

(3) Type "`"C:\Program Files\FN-PS551\ServiceUty.exe"`", then click [OK].



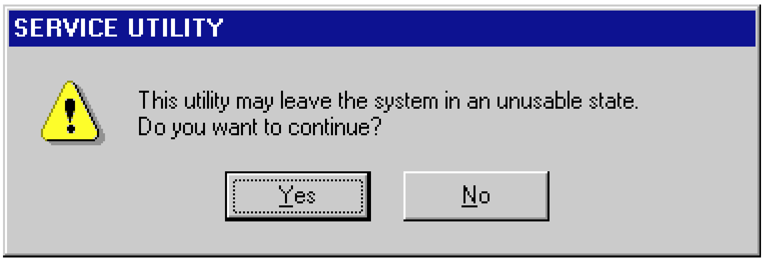
Run

Type the name of a program, folder, or document, and Windows will open it for you.

Open: "C:\Program Files\FN-PS551\ServiceUty.exe"

☑ Run in Separate Memory Space

→ The [SERVICE UTILITY] alert appears once the service utility has started up.



SERVICE UTILITY

This utility may leave the system in an unusable state.
Do you want to continue?

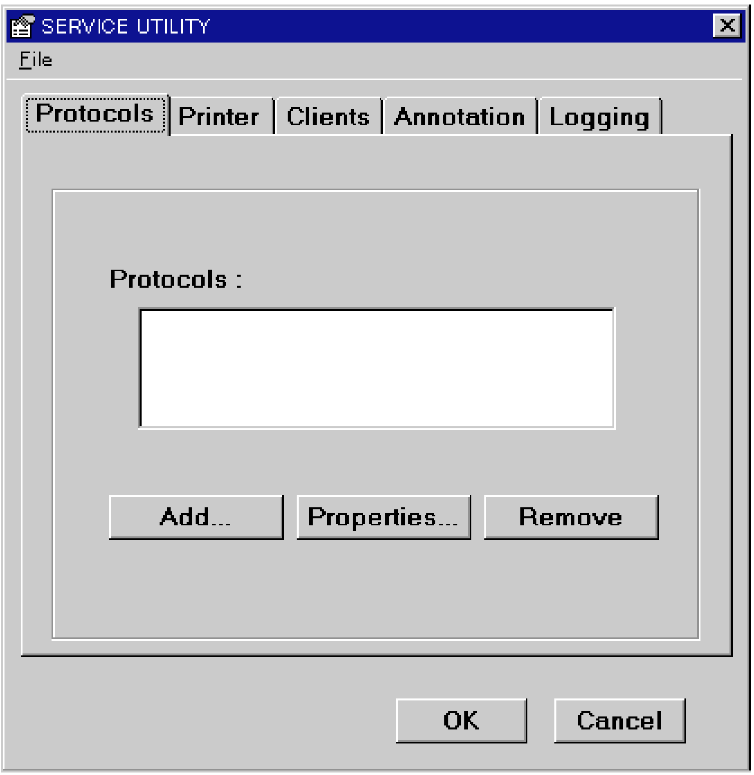
(4) Click [Yes] to proceed to the next step.

◆ REFERENCE ◆

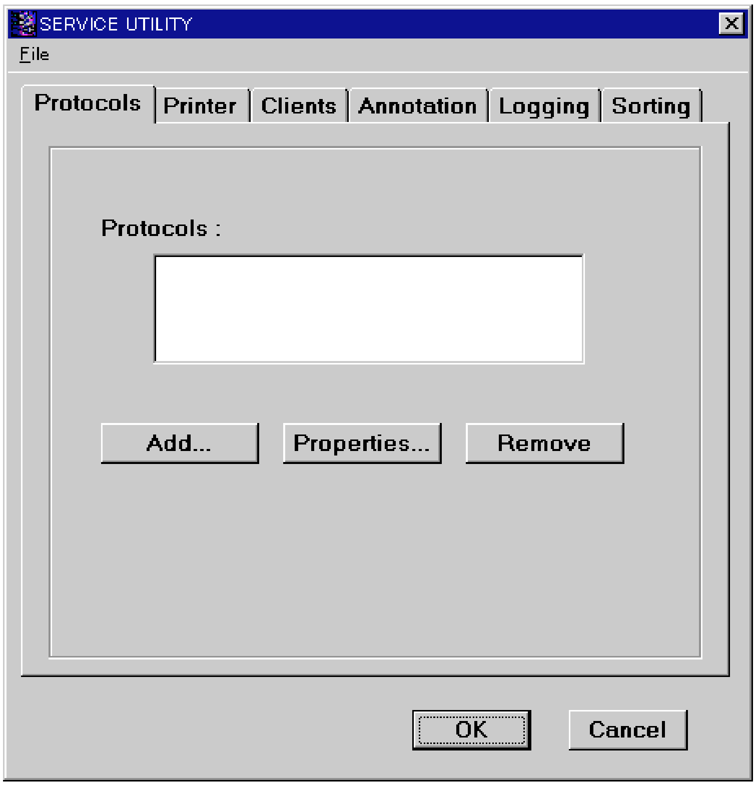
The [SERVICE UTILITY] alert is designed to ensure that only authorized service engineers can access to the service utility.

→ The [SERVICE UTILITY] window appears (the [Protocols] window opens at the initial state).

(Software ver. A00)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Protocols :
Add...
Properties...
Remove
OK
Cancel

(Software ver. A02 or later)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Protocols :
Add...
Properties...
Remove
OK
Cancel

■ Quitting from the Service Utility

To exit from the service utility, choose one of the buttons shown below on the [SERVICE UTILITY] window.

- Click the [OK] button to save changes and exit from the service utility.
- Click the [Cancel] button to exit from the service utility without saving changes. All previous settings remain.

◆ REFERENCE ◆

Clicking the close box ☒ at the top right-hand corner of the window produces the same result as clicking [Cancel].

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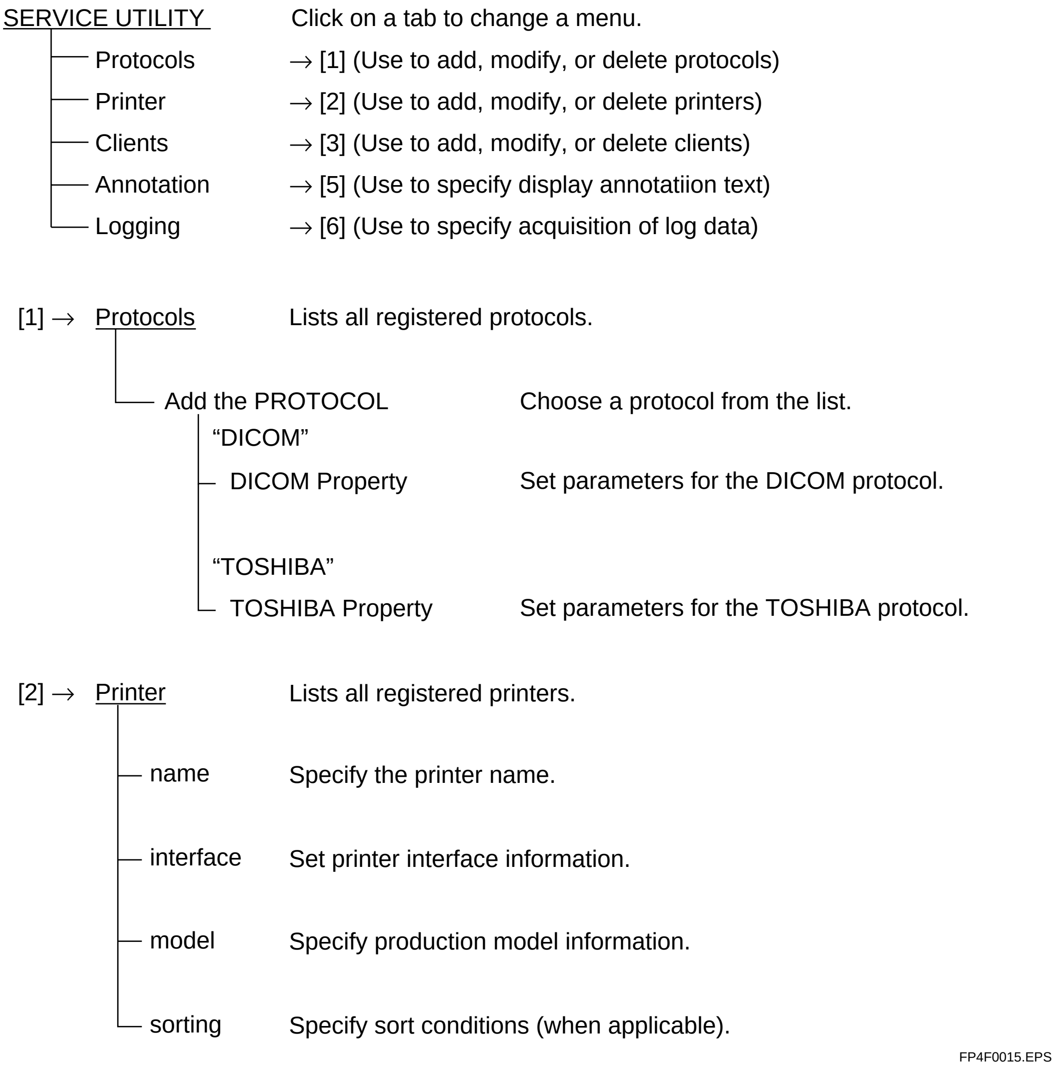
7.2 Service Utility Menu Tree

■ Software ver. A00



SERVICE UTILITY — Click on a tab to change a menu.
- Protocols → [1] (Use to add, modify, or delete protocols)
- Printer → [2] (Use to add, modify, or delete printers)
- Clients → [3] (Use to add, modify, or delete clients)
- Annotation → [5] (Use to specify display annotatiion text)
- Logging → [6] (Use to specify acquisition of log data)

[1] → Protocols — Lists all registered protocols.
- Add the PROTOCOL — Choose a protocol from the list.
  - "DICOM"
    - DICOM Property — Set parameters for the DICOM protocol.
  - "TOSHIBA"
    - TOSHIBA Property — Set parameters for the TOSHIBA protocol.

[2] → Printer — Lists all registered printers.
- name — Specify the printer name.
- interface — Set printer interface information.
- model — Specify production model information.
- sorting — Specify sort conditions (when applicable).

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- [3] → Clients — Lists all clients (image diagnostic systems) connected to the FN-PS551 via network.
  - name — Specify client ID information.
  - protocol — Specify the protocol for connection to the client.
    - DICOM — To set a new DICOM protocol client.
    - TOSHIBA — To set a new TOSHIBA protocol client.
    - DICOM default — To use the DICOM defaults.
  - magnify — Specify the enlargement/reduction processing method and associated parameters.
    - procedure : A-VR — A-VR method
    - procedure : SSM — SSM method
  - LUT (DICOM) — Specify the tone correction processing method and associated parameters (DICOM).
    - procedure : SAR — SAR method
    - procedure : BAR — BAR method
  - LUT (TOSHIBA) — Specify the tone correction processing method and associated parameters (TOSHIBA).
    - Click [Setup...] from [modality] option, then go to → [4] Modality Setup
    - procedure : SAR — SAR method
    - procedure : BAR — BAR method
  - printer — Specify client-dependent default values for the output printer (fixed, primary/secondary, random).
  - output format — Specify client-dependent default values for the output format.

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- [4] → Modality Setup — Specify tone correction processing parameters for each modality (required for TOSHIBA protocol only).
  - Add Modality Entry — Lists modalities that can be registered.
    - LUT — Specify tone correction processing method and associated parameters.
      - procedure : SAR — SAR method
      - procedure : BAR — BAR method
- [5] → Annotation — Specify annotation text to appear on output film and the margin between images.
  - Annotation Box display — Input annotation text.
  - Font — Specify the font of the annotation text.
- [6] → Logging — Specify log data acquisition and other settings.

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■ Software ver. A02 or later

SERVICE UTILITY — Click on a tab top menu to change a menu.

- Protocols → [1] (Use to add, modify, or delete protocols)
- Printer → [2] (Use to add, modify, or delete printers)
- Clients → [3] (Use to add, modify, or delete clients)
- Annotation → [5] (Use to specify display annotatiion text, and film output format related settings for IPU function)
- Logging → [6] (Use to specify acquisition of log data)
- Sorting → [7] (Use to specify sort conditions)

[1] → Protocols — Lists all registered protocols.

- Add the PROTOCOL — Choose a protocol from the list.
  - "DICOM"
    - DICOM Property — Set parameters for the DICOM protocol.
  - "TOSHIBA"
    - TOSHIBA Property — Set parameters for the TOSHIBA protocol.
  - "Multi Modality DMS (FINP)"
    - FINP Property — Set parameters for the FUJI protocol (Fuji Integrated Network Protocol (FINP)). (Available with software ver. A03 or later although it appears even with software ver.A02 or later)

[2] → Printer — Lists all registered printers.

- name — Specify the printer name.
- interface — Set printer interface information.
- model — Specify production model information.

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- [3] → Clients — Lists all clients (image diagnostic systems or FCR systems) connected to the FN-PS551 via network.
  - name — Specify client ID information.
  - protocol — Specify the protocol for connection to the client.
    - DICOM — To set a new DICOM protocol client.
    - TOSHIBA — To set a new TOSHIBA protocol client.
    - DICOM default — To use the DICOM defaults.
    - FINP — To set a new FUJI protocol (FINP) client. (Available with software ver. A03 or later although it appears even with software ver.A02 or later)
  - magnify — Specify the enlargement/reduction processing method and associated parameters.
    - procedure : A-VR — A-VR method
    - procedure : SSM — SSM method
  - LUT (DICOM) — Specify the tone correction processing method and associated parameters (DICOM).
    - procedure : SAR — SAR method
    - procedure : BAR — BAR method
  - LUT (TOSHIBA) — Specify the tone correction processing method and associated parameters (TOSHIBA).
    - Click [Setup...] from [modality] option, then go to → [4] Modality Setup
    - procedure : SAR — SAR method
    - procedure : BAR — BAR method
  - printer — Specify client-dependent default values for the output printer (fixed, primary/secondary, random).
  - output format — Specify client-dependent default values for the output format. (for [output format1] and [output format2], if software ver. A05 or later is used)
- [4] → Modality Setup — Specify tone correction processing parameters for each modality (required for TOSHIBA protocol only).
  - Add Modality Entry — Lists modalities that can be registered.
    - LUT — Specify tone correction processing method and associated parameters.
      - procedure : SAR — SAR method
      - procedure : BAR — BAR method
- [5] → Annotation — Specify annotation text to appear on output film, and film output format related settings for IPU function.
  - Print Server — Specify annotation text and margin between images to print out images received through DICOM and TOSHIBA protocols. (Specification of [a margin between images] is changed to [output format2] of [Clients] if software ver. A05 or later is used)
  - IPU 1 to 15
  - IPU 16 to 26
  - IPU 27 to 34
  - IPU 35 to 39

  (IPU 1 to 39:) Specify film output format related settings to print out images (CR images) received through IPU function. (Available with software ver. A03 or later although it appears even with software ver. A02 or later)
- [6] → Logging — Specify log data acquisition and other settings.
- [7] → Sorting — Specify sort conditions (When applicable).

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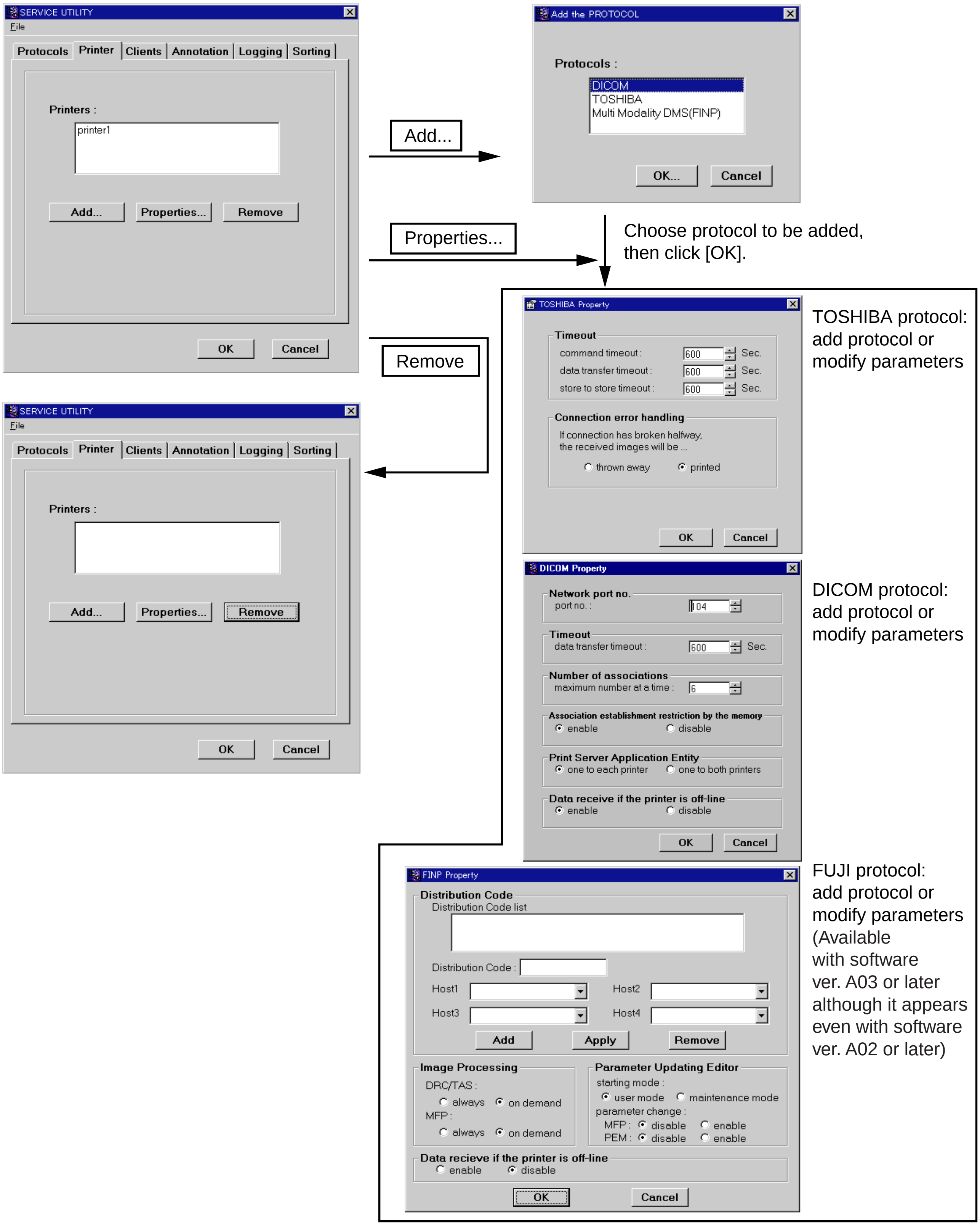
7.3 Adding, Modifying, or Deleting Protocols [Protocols]

■ [Protocols] Menu Sequence

- Add protocols : Click [Add...].
- View/modify protocol settings : Select the protocol to view or modify, and then click [Properties...].
- Delete protocol : Select the protocol to delete, and then click [Remove].


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Printers :
printer1
Add...
Properties...
Remove
OK
Cancel
Add...
Properties...
Remove
Add the PROTOCOL
Protocols :
DICOM
TOSHIBA
Multi Modality DMS(FINP)
OK...
Cancel
TOSHIBA Property
DICOM Property
FINP Property
Add
Apply
Remove
OK
Cancel

Choose protocol to be added, then click [OK].

TOSHIBA protocol: add protocol or modify parameters

TOSHIBA Property

Timeout
command timeout : 600 Sec.
data transfer timeout : 600 Sec.
store to store timeout : 600 Sec.

Connection error handling
If connection has broken halfway, the received images will be ...
○ thrown away ● printed

DICOM protocol: add protocol or modify parameters

DICOM Property

Network port no.
port no. : 104

Timeout
data transfer timeout : 600 Sec.

Number of associations
maximum number at a time : 6

Association establishment restriction by the memory
● enable ○ disable

Print Server Application Entity
● one to each printer ○ one to both printers

Data receive if the printer is off-line
● enable ○ disable

FUJI protocol: add protocol or modify parameters (Available with software ver. A03 or later although it appears even with software ver. A02 or later)

FINP Property

Distribution Code
Distribution Code list
Distribution Code :
Host1
Host2
Host3
Host4

Image Processing
DRC/TAS :
○ always ● on demand
MFP :
○ always ● on demand

Parameter Updating Editor
starting mode :
● user mode ○ maintenance mode
parameter change :
MFP : ● disable ○ enable
PEM : ● disable ○ enable

Data recieve if the printer is off-line
○ enable ● disable

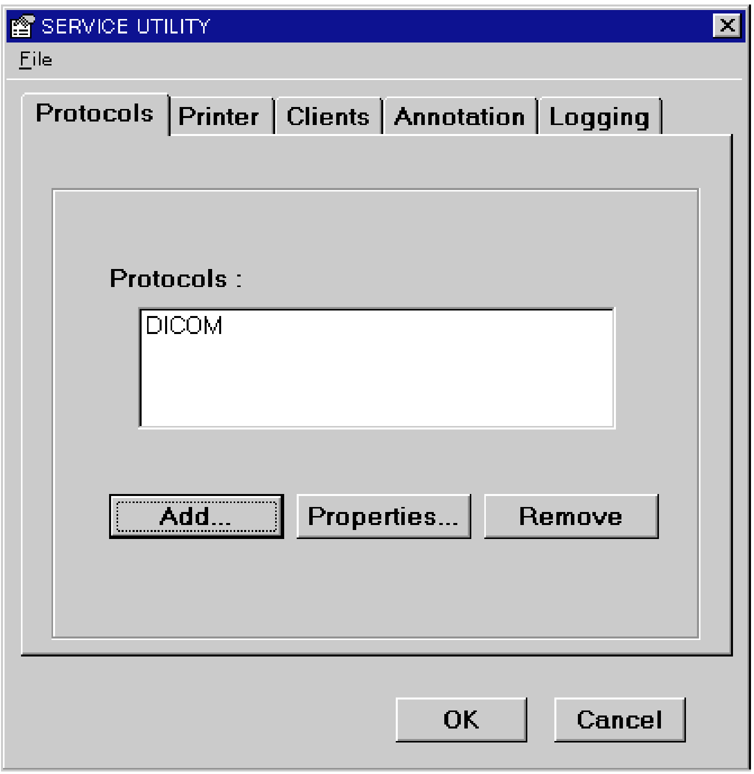
◆ NOTE ◆

- The protocols displayed on the [Protocols:] list in the [Add the PROTOCOL] window do not necessarily correspond to the functions enabled in the key registry software (i.e., DICOM, TOSHIBA or IPU). Always the protocol list indicates all protocols.
  Only protocols enabled by the key registry software are available for use. Selecting another protocol dose not make it available for use.
- FN-PS551 supports the following three protocols (when the appropriate key registry software programs must be installed):
  - DICOM: Specify DICOM parameters.
  - TOSHIBA: Specify TOSHIBA parameters.
  - Multi Modality DMS (FINP): Specify IPU function parameters under FUJI protocol (FINP) (supporting software ver. A03 or later).

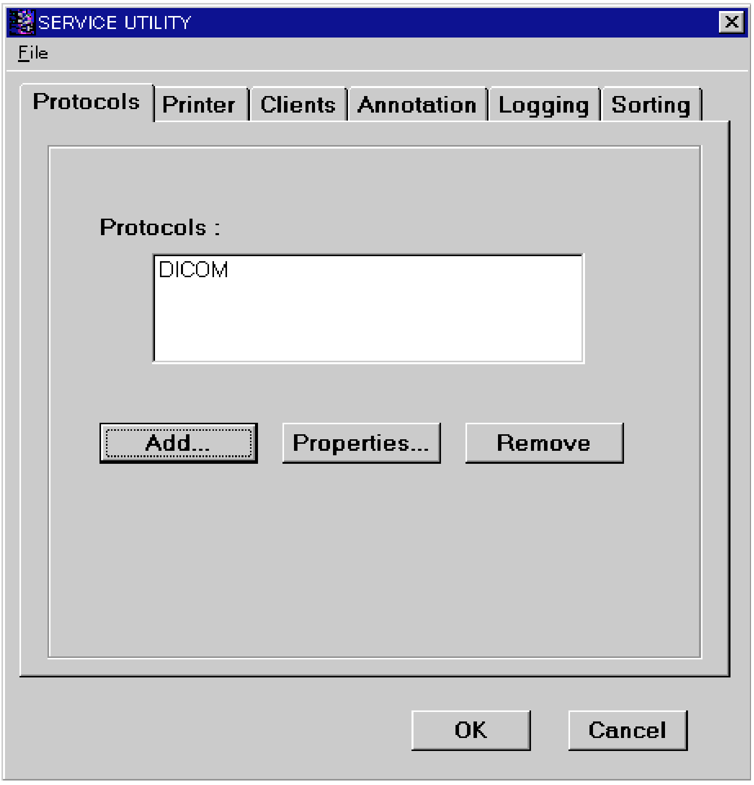
■ Display of [Protocols] Window

(1) From the [SERVICE UTILITY] window, click the [Protocols] tab.
→ The [Protocols] window appears.

(Software ver. A00)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Protocols :
DICOM
Add...
Properties...
Remove
OK
Cancel

(Software ver. A02 or later)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Protocols :
DICOM
Add...
Properties...
Remove
OK
Cancel

◆ NOTE ◆

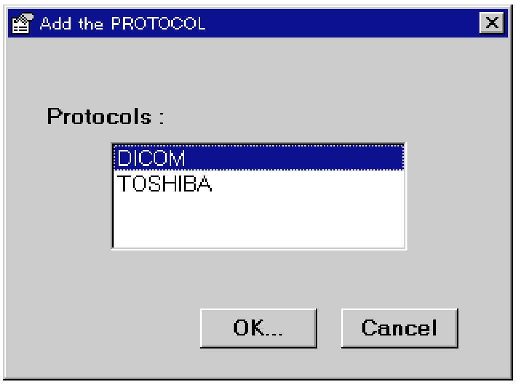
The [Protocols:] list in the [Protocols] window shows all currently registered protocols (no protocol is registered at installation).

- To Add a Protocol

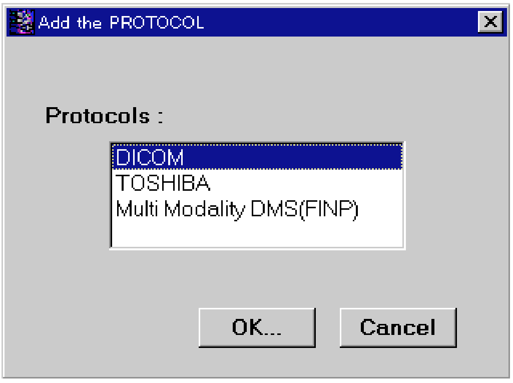
(1) On the [Protocols] window, click [Add...] .

→ The [Add the PROTOCOL] window appears.

(Software ver. A00)


Add the PROTOCOL
Protocols :
DICOM
TOSHIBA
OK...
Cancel

(Software ver. A02 or later)


Add the PROTOCOL
Protocols :
DICOM
TOSHIBA
Multi Modality DMS(FINP)
OK...
Cancel

(2) From the [Protocols:] list in the [Protocols] window, select a protocol to add, then click [OK...].

→ The parameter settings window appears for the selected protocol (go to “ ■ Using Parameter Settings Windows”).

- To View and/or Modify Protocol Settings

(1) From the [Protocols:] list in the [Protocols] window, select a protocol to view or modify, then click [Properties...].

→ The parameter settings window appears for the selected protocol (go to “ ■ Using Parameter Settings Windows”).

- To Delete a Registered Protocol

(1) From the [Protocols:] list in the [Protocols] window, select a protocol to delete, then click [Remove].

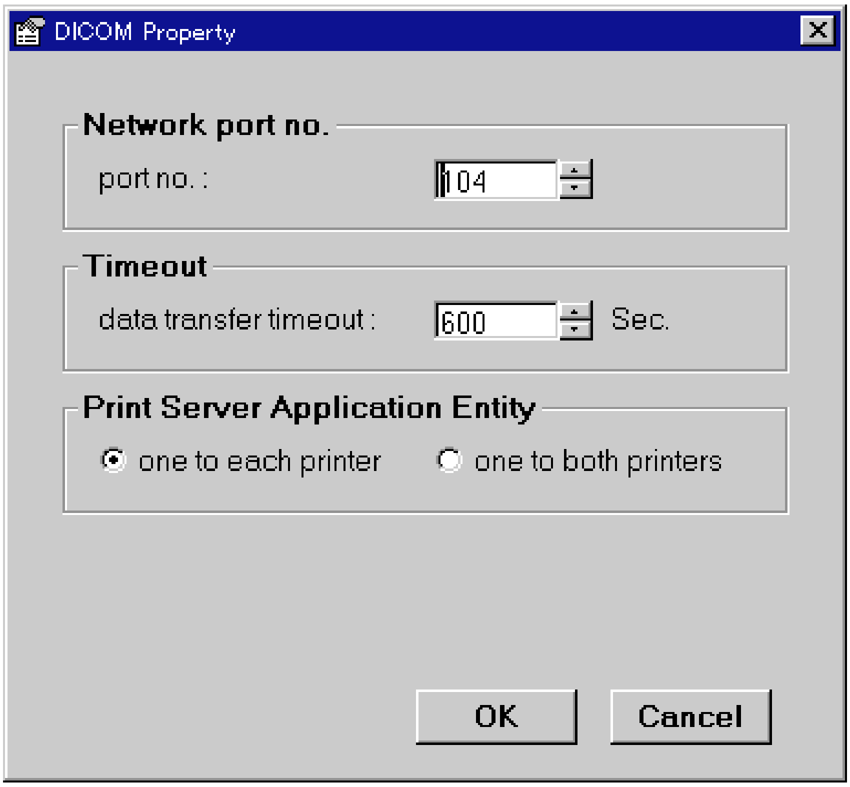
→ The selected protocol is deleted.

■ Using Parameter Settings Windows

● [DICOM Property] Window

The [DICOM Property] window appears to add a protocol or view/modify protocol settings when the “DICOM” is selected from the [Protocols:] list.

(Software ver. A03 or earlier)



DICOM Property

Network port no.

port no. : 104

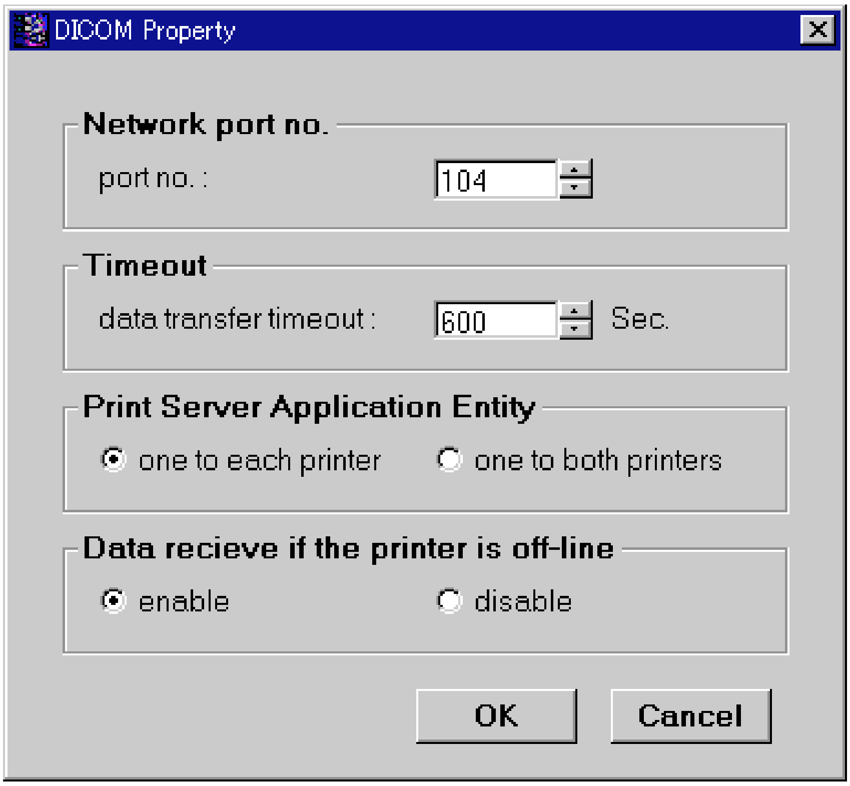
Timeout

data transfer timeout : 600 Sec.

Print Server Application Entity

● one to each printer ○ one to both printers

(Software ver. A04 to A06)



DICOM Property

Network port no.

port no. : 104

Timeout

data transfer timeout : 600 Sec.

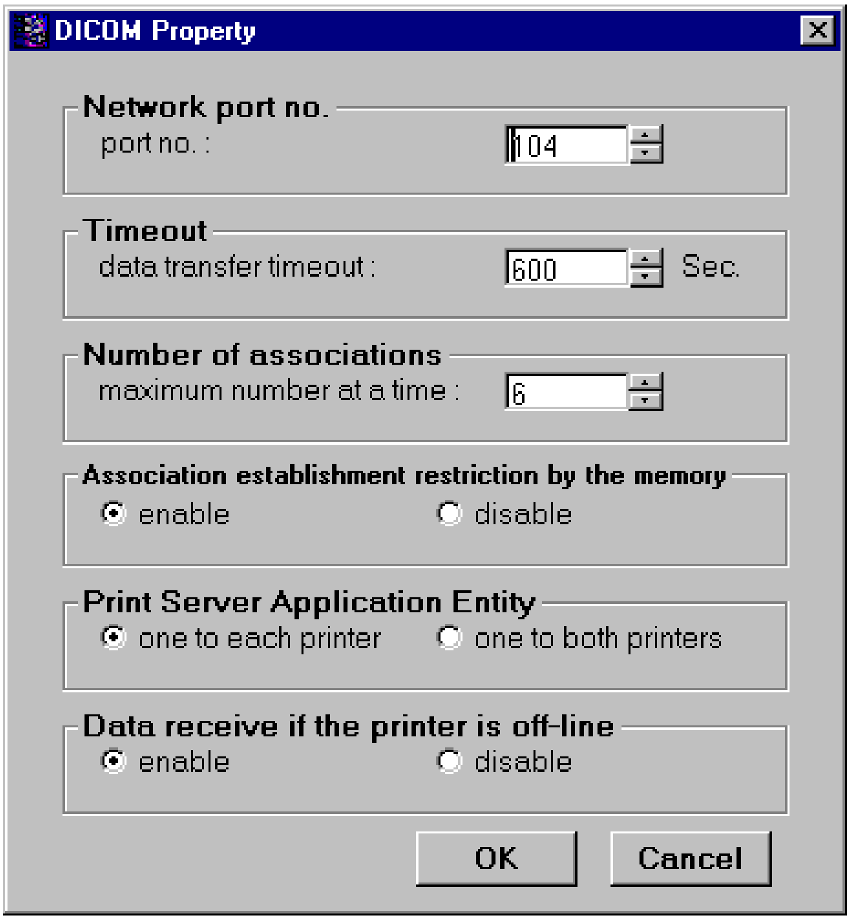
Print Server Application Entity

● one to each printer ○ one to both printers

Data recieve if the printer is off-line

● enable ○ disable

(Software ver. A07 or later)



DICOM Property

Network port no.
port no. : 104

Timeout
data transfer timeout : 600 Sec.

Number of associations
maximum number at a time : 6

Association establishment restriction by the memory
● enable ○ disable

Print Server Application Entity
● one to each printer ○ one to both printers

Data receive if the printer is off-line
● enable ○ disable

(1) To add or modify a protocol, set the following parameters.

- [Network port no.]:
  The port number used by FN-PS551 for DICOM transmission can be specified in the range of 1 to 65,535 (the default value is 104).
  Normally the default for the port number should be used. If the connected DICOM client does not work properly with the default value, reset the network port number to the value given at the DICOM client end.
- [Timeout]:
  The transmission timeout value can be specified in the range of 30 to 3,600 seconds (the default value is 600 seconds). The timeout value represents the maximum time limit for the FN-PS551 to wait for data to arrive. If data does not arrive within the set time, a timeout occurs.
  Normally the default for the timeout should be used. If the connected DICOM client does not work properly with the default value, reset the timeout to the value given at the DICOM client end.

- [Number of associations] (supporting software ver. A07 or later):
  Number of associations to be established simultaneously for DICOM protocol.

  ◆ NOTE ◆

  Do not change the default values in (6) because it is not necessary to change settings using this function.

- [Association establishment restriction by the memory] (supporting software ver. A07 or later):
  When connecting with multiple DICOM clients simultaneously, settings must be made as to whether dynamic association establishment restriction control is to be performed or not to avoid connection errors.
  - [enable]: Establishment of association is restricted by the remaining memory capacity (default value).
    This is set when connecting only with FCR console (CR-IR346CL/348CL).
  - [disable]: Restriction according to remaining memory capacity is not performed.
    This is set when another modality connections other than FCR console are included.

  ◆ NOTE ◆

  The following control is performed for dynamic association establishment restriction.
  - Judgement as to whether to accept a requested connection is made according to the memory capacity mounted on FN-PS551, memory capacity actually used by a connected client and the expected memory capacity that may be used by a client requiring a connection.
  - If the connection request is not accepted, stand-by while monitoring whether the connection process is completed. If the connection request is not accepted even after 30sec., a reject (connection disabled) message is returned to the client requesting connection.
  - In the case of a client connecting with FN-PS551, max. memory capacity used by the client is stored. Based on this data, the expected memory capacity that may be used by a client requesting a connection is judged.

- [Print Server Application Entity]:
  This parameter specifies the type of application entity titles (AE Title) assigned to the FN-PS551 system. When two printers are connected, an AE Title for each printer (so that the each printer are seen as an independent unit) or an AE Title for the complete system (so that two printers are seen as a single unit) can be specified.
  This setting will depend on the system operation method in the relevant location, so check with the relevant users before changing it.
  - [one to each printer]: Assigns a AE Title to each printer.
  - [one to both printers]: Assigns a AE Title to the complete system. In this case, the AE Title for "Printer #1" is applied ("Printer #1" is connected to the first printer interface board).

◆ NOTE ◆

- If [one to each printer] is set, print output is performed only to the printer specified with the AE Title by the client.
- If [one to both printers] is set, print output is performed on the printer set at " ● [printer] Window" in the "7.5 Adding, Modifying, or Deleting a Client [Clients]" although the AE Title specified by the client is that of Printer #1.

- [Data receive if the printer is off-line] (supporting software ver. A04 or later):
  Print accepting method corresponding to printer status (default value: enable).
  - [enable]: Print is accepted regardless of the status while starting up or operating the FN-PS551 application.
    The image data is stored in the hard disk, and the print output is performed after the status is returned to [Operating].
  - [disable]: Print is only accepted in the [Operating] status while starting up or operating the FN-PS551 application.

(2) Set the parameters and click [OK].

→ The [Protocols] window on the [SERVICE UTILITY] window reappears.

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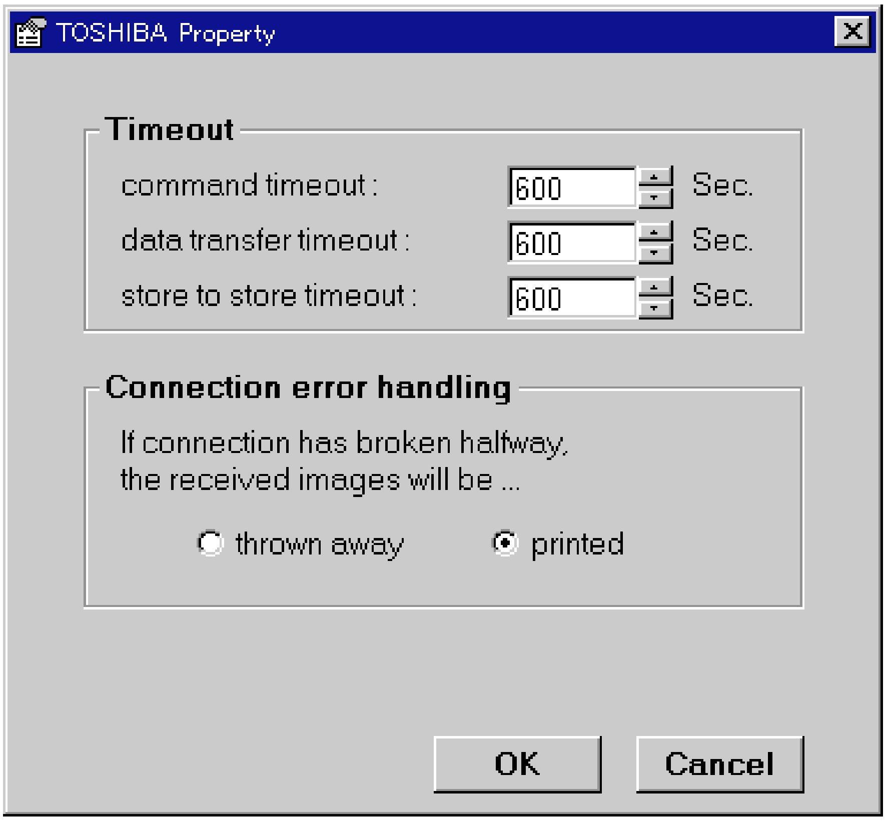
- [TOSHIBA Property] Window

  The [TOSHIBA Property] window appears to add a protocol or view/modify protocol settings when the “TOSHIBA” is selected from the [Protocols:] list.



TOSHIBA Property

Timeout

command timeout : 600 Sec.

data transfer timeout : 600 Sec.

store to store timeout : 600 Sec.

Connection error handling

If connection has broken halfway,
the received images will be ...

○ thrown away ● printed

(1) To add or modify a protocol, set the following parameters.

- [Timeout]:
  Three timeout values can be specified in the range of 30 to 3,600 seconds (the default value is 600 seconds).
  Normally the default for the timeout should be used.
    - [command timeout:] (timeout for interval between commands):
      Specifies the maximum time from the beginning of a given command transfer to the beginning of the next command transfer in the course of a series of communication process.
    - [data transfer timeout:] (timeout for image data transfer):
      Specifies the maximum time for transferring image data.
    - [store to store timeout:] (timeout between stores):
      Specifies the maximum time from the end of a given frame transfer to the beginning of the next frame transfer in a single film.
- [Connection error handling]:
  Specifies how to handle image data in a film received before connection has broken halfway during transmission (the default value is printed).
  Normally the default for the connection error handling should be used. However, it can be changed if the relevant user specifically does not need to print only received image data until the connection error has occurred.
    - [thrown away]: Received data is discarded.
    - [printed]: Received data alone is printed.

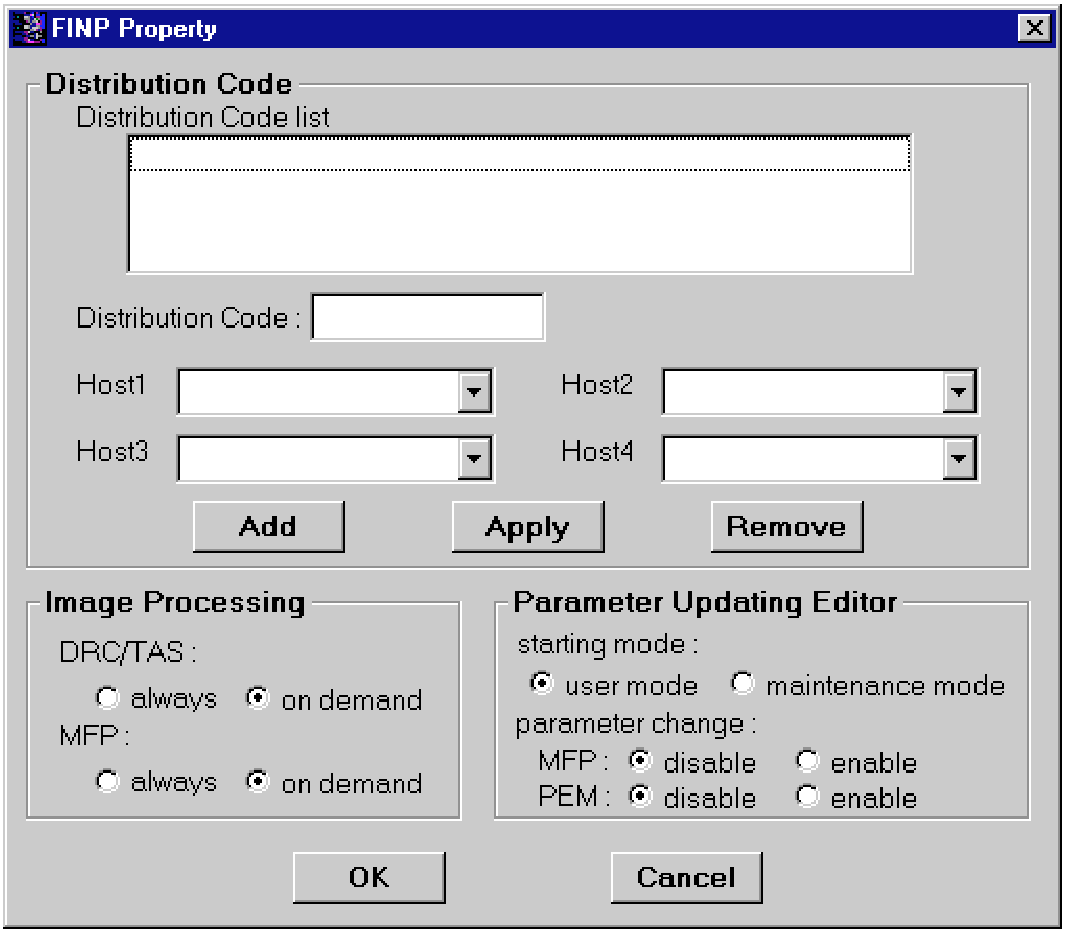
(2) Set the parameters and click [OK].

→ The [Protocols] window on the [SERVICE UTILITY] window reappears.

- [FINP Property] Window (supporting software ver. A03 or later)

  The [FINP Property] window appears to add a protocol or view/modify protocol settings when the “Multi Modality DMS (FINP)” is selected from the [Protocols:] list.

(Software ver. A03)


FINP Property
Distribution Code
Distribution Code list
Distribution Code :
Host1
Host2
Host3
Host4
Add
Apply
Remove
Image Processing
Parameter Updating Editor
OK
Cancel

DRC/TAS : ○ always ● on demand

MFP : ○ always ● on demand

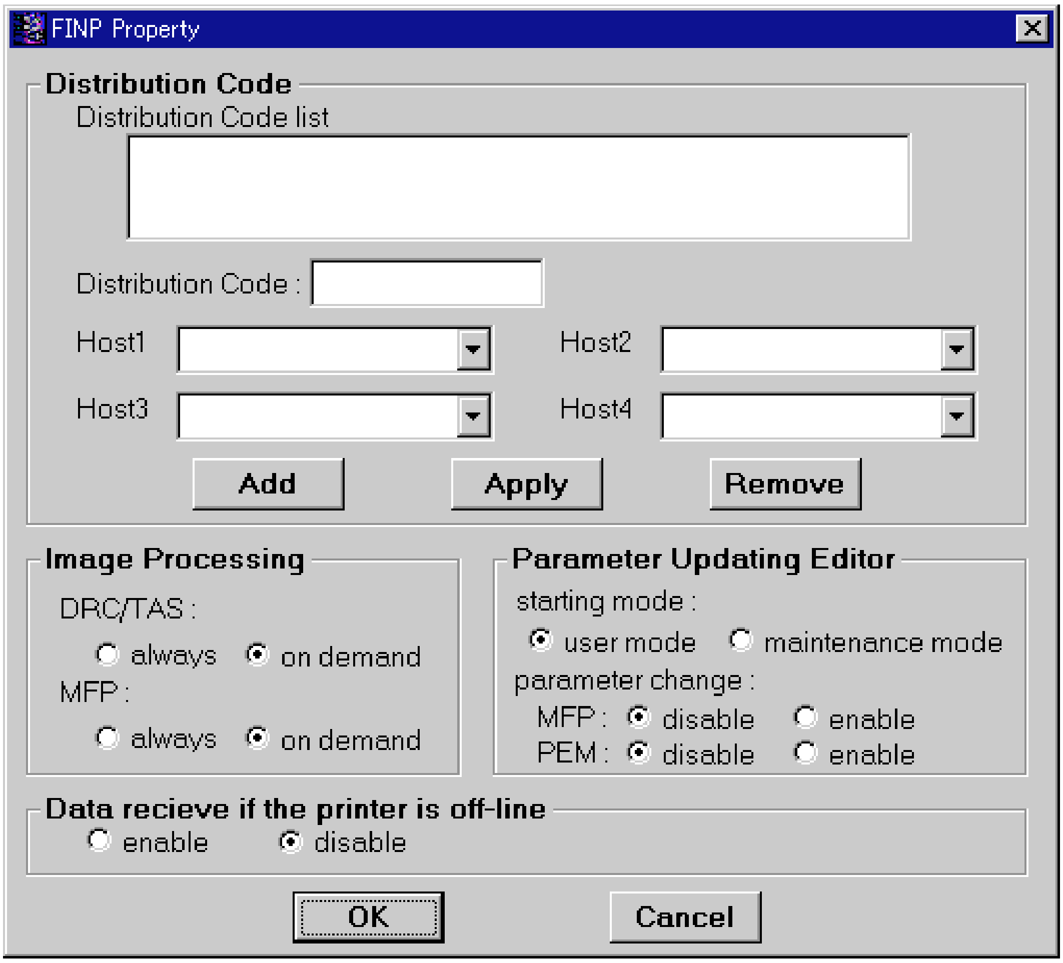
starting mode : ● user mode ○ maintenance mode

parameter change :

MFP : ● disable ○ enable

PEM : ● disable ○ enable

(Software ver. A04 or later)


FINP Property
Distribution Code
Distribution Code list
Distribution Code :
Host1
Host2
Host3
Host4
Add
Apply
Remove
Image Processing
Parameter Updating Editor
Data recieve if the printer is off-line
OK
Cancel

DRC/TAS : ○ always ● on demand

MFP : ○ always ● on demand

starting mode : ● user mode ○ maintenance mode

parameter change :

MFP : ● disable ○ enable

PEM : ● disable ○ enable

Data recieve if the printer is off-line: ○ enable ● disable

◆ NOTE ◆

- The [FINP Property] window is available with software ver. A03 or later although it appears even with software ver. A02 or later.
- Any setting cannot be made as the “Distribution Code” on the [FINP Property] window is disabled (not currently available).
- To use the IPU function, specify parameters according to the procedure described in the “ ❍ Setting Image Processing”, “ ❍ Setting Parameter Updating Editor” and “ ❍ Setting Data recieve if the printer is off-line”.

❍ Setting Image Processing

(1) Specifies how to handle data, when the following image processing parameters are not included in the image data from a client when the IPU function is active (Default: on demand).

- [DRC/TAS:]:
  Dynamic range control processing and Tomographic artifact suppression processing parameters.
- [MFP:]:
  Multi-objective frequency processing parameter.
  - [always]: If the parameter is missing, it is processed with the internal parameter of the FN-PS551. In this case, however, a appropriate parameter has to be set with Parameter Updating Editor beforehand.
  - [on demand]: If the parameter is missing, the appropriate image processing is not performed. The processing is performed only if the parameter is sent from a client using that parameter.

(2) Set the parameters and click [OK].

→ The [Protocols] window on the [SERVICE UTILITY] window reappears.

❍ Setting Parameter Updating Editor

CAUTION

- The backup of following setting items is not made in a floppy disk by saving a setting file with the [File] menu. It must be, therefore, reset if the software is reinstalled.
- Set [starting mode:] to [user mode] when it is operated by a user.

◆ NOTE ◆

- If [starting mode:] is [user mode] when software ver. A04 or later is used, [Parameter Updating Editor] from [Utility] menu in the FN-PS551 Application Window can not be used in some cases depending on the combination of setting details in “❍Setting Image Processing” and [parameter change:] below. This is because [Parameter Updating Editor] is not usable if parameter editing is not practically possible under the setting conditions. Even if [Parameter Updating Editor] is usable, editable parameters vary depending on various setting details.
- Refer to the “FN-PS551 Operation Manual” for further information about the Parameter Updating Editor including how to use it.

(1) Set the operating conditions of Parameter Updating Editor that is used to edit Exposure Menu and Image Processing Parameters when the IPU function is active.

- [starting mode:]:
  Set the operating mode of Parameter Updating Editor (default: user mode).
  - [user mode]: A mode to be used for editing based on the standard menu codes (a mode for user operation).
  - [maintenance mode]: A mode to be used for editing based on one that includes other than standard menu codes. In this setting, the following [parameter change:] setting does not exist (all Image Processing Parameters are editable.)
- [parameter change:]:
  Set the appearance of the Image Processing Parameters editing screen of Parameter Updating Editor.
  - [MFP:]: Select either [disable](default:disappear) or [enable](appear) for the Image Processing Parameters editing screen of Multi-objective frequency processing.
  - [PEM:]: Software ver. A04 or later: Select either [disable] (default: disappear) or [enable] (appear) for the Image Processing Parameters editing screen of Pattern enhancement processing for mammography.
    Software ver. A03 or earlier: Cannot be used, leave it [disable] (default: disappear).

(2) Set the parameters and click [OK].

→ The [Protocols] window on the [SERVICE UTILITY] window reappears.

❍ Setting Data receive if the printer is off-line (supporting software ver. A04 or later)

(1) Set the print accepting method corresponding to printer status (default: disable).

- [enable]: Print is accepted regardless of the status while starting up or operating the FN-PS551 application.
  The image data is stored in the hard disk, and the print output is performed after the status is returned to [Operating].
- [disable]: Print is only accepted in the [Operating] status while starting up or operating the FN-PS551 application.

(2) Set the parameters and click [OK].

→ The [Protocols] window on the [SERVICE UTILITY] window reappears.

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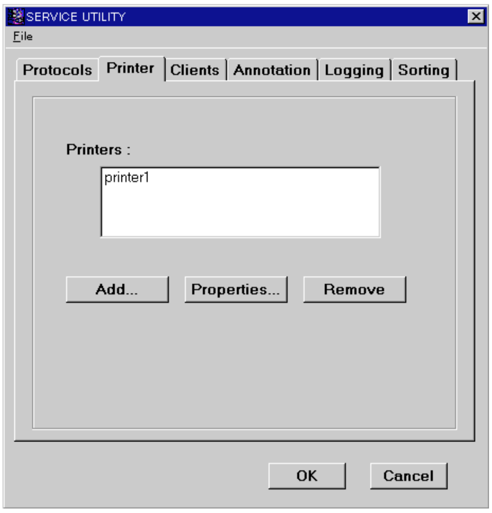
7.4 Adding, Modifying, or Deleting a Printer [Printer]

■ [Printer] Menu Sequence

• Add printer	: Click [Add...].
• View/modify printer settings	: Select a printer to view or modify, and then click [Properties...].
• Delete printer	: Select a printer to delete, and then click [Remove].

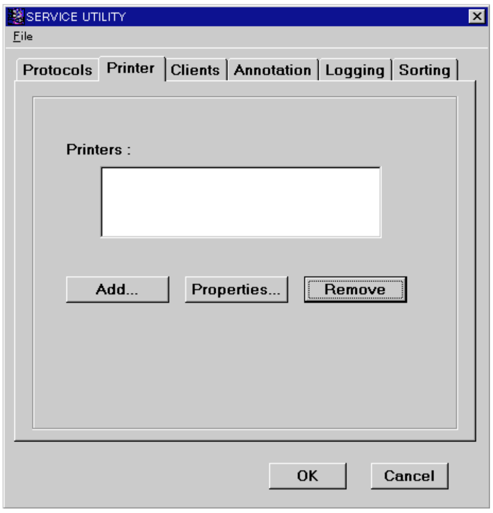

SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Add...
Properties...
Remove
OK
Cancel

Printers : printer1

Add...

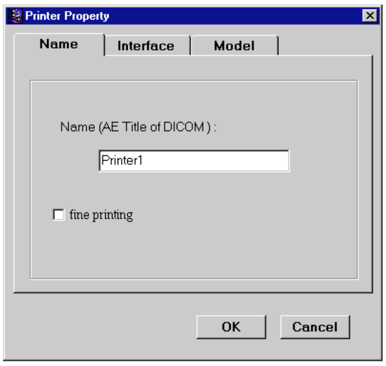
Properties...

Remove


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Add...
Properties...
Remove
OK
Cancel

Printers :

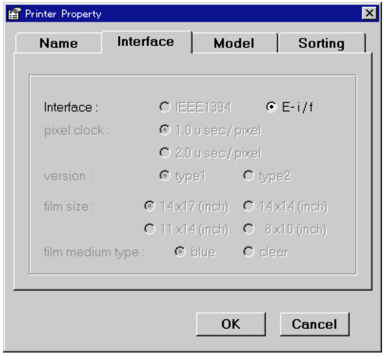
When adding a printer or modifying parameters, go through all “Printer Property” tabs.


Printer Property
Name
Interface
Model
OK
Cancel

Name (AE Title of DICOM) : Printer1

☐ fine printing

Name


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

Interface : ○ IEEE1394 ● E-i/f

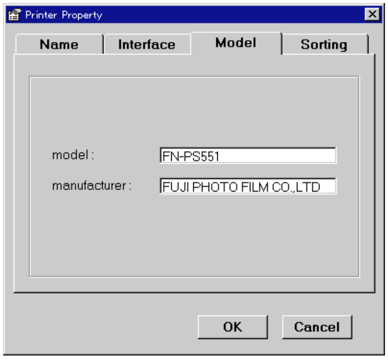
pixel clock : ● 1.0 u sec / pixel ○ 2.0 u sec / pixel

version : ● type1 ○ type2

film size : ● 14x17 (inch) ○ 14x14 (inch) ○ 11x14 (inch) ○ 8x10 (inch)

film medium type : ● blue ○ clear

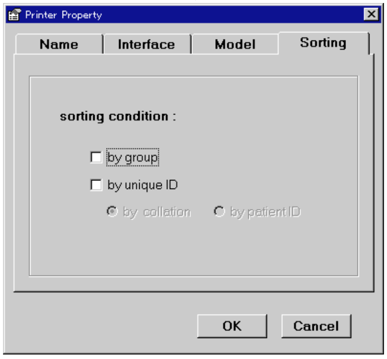
Interface


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

model : FN-PS551

manufacturer : FUJI PHOTO FILM CO.,LTD

Model


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

sorting condition :

☐ by group

☐ by unique ID

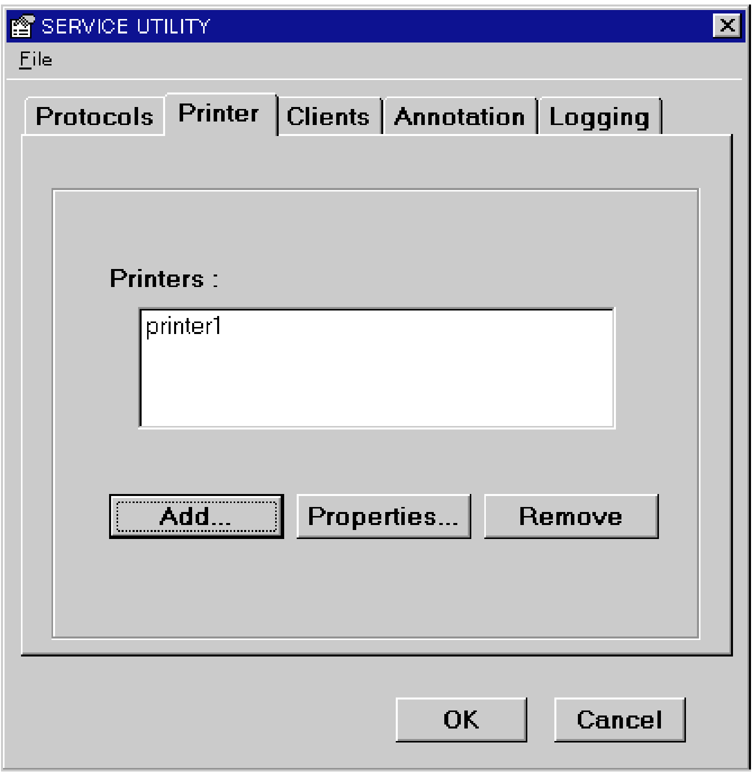
● by collation ○ by patient ID

Sorting (Using software ver. A00)

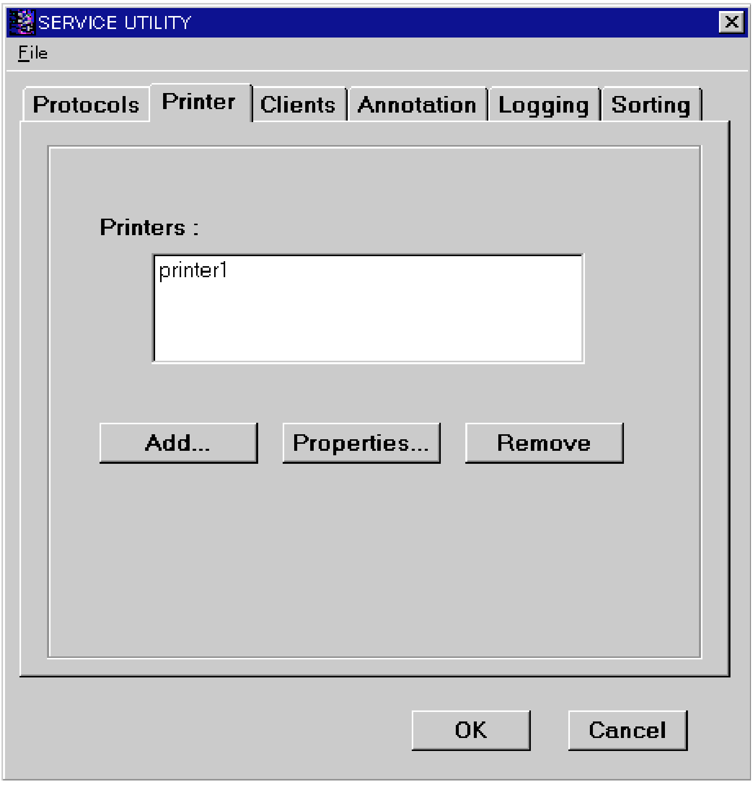
■ Display of [Printer] Window

(1) From the [SERVICE UTILITY] window, click the [Printer] tab.
→ The [Printer] window appears.

(software ver. A00)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Printers :
printer1
Add...
Properties...
Remove
OK
Cancel

(software ver. A02 or later)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Printers :
printer1
Add...
Properties...
Remove
OK
Cancel

◆ NOTE ◆

- The [Printers:] list in the [Printer] window shows all currently registered printers (no printer is registered at installation).
- When two printers are registered, the upper part of the display corresponds to “Printer #1” and the lower part to “Printer #2”.
  It is noted that “Printer #1” and “Printer #2” are defined as the printers connected to the first and second printer interface boards respectively.

● To Add a Printer

(1) On the [Printer] window, click [Add...].

→ The [Printer Property] window appears (go to “ ■ Using [Printer Property] Window).

● To View and/or Modify Printer Settings

(1) From the [Printers:] list of the [Printers] window, select a printer to view or modify, then click [Properties...].

→ The [Printer Property] window appears (go to “ ■ Using [Printer Property] Window”).

● To Delete a Registered Printer

(1) From the [Printers:] list of the [Printers] window, select a printer to delete, then click [Remove].

→ The selected printer is deleted.

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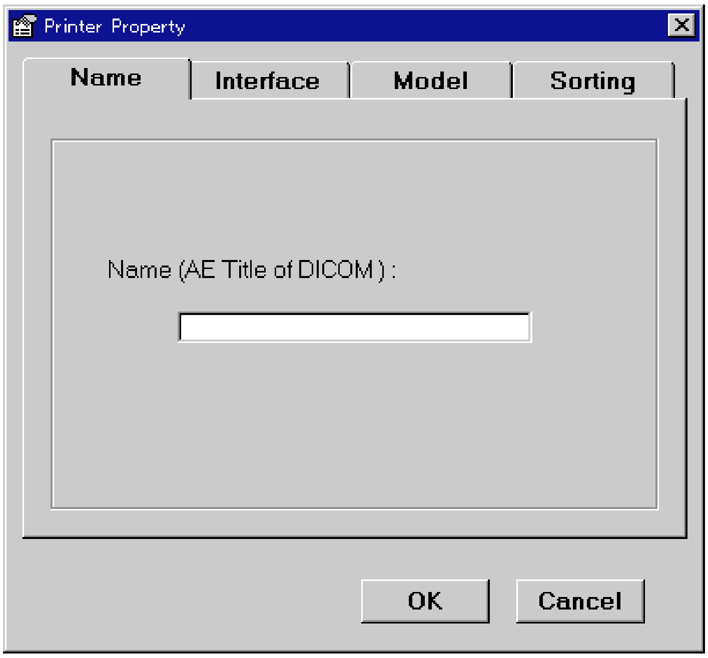
■ Using [Printer Property] Window

◆ NOTE ◆

- The [Printer Property] window is used to specify printer parameters.
- When two printers are connected, set parameters for “Printer #1” first (“Printer #1” is connected to the first printer interface board).
- There are four setting windows (three for software ver. A02 or later). Use the tabs to move among windows.

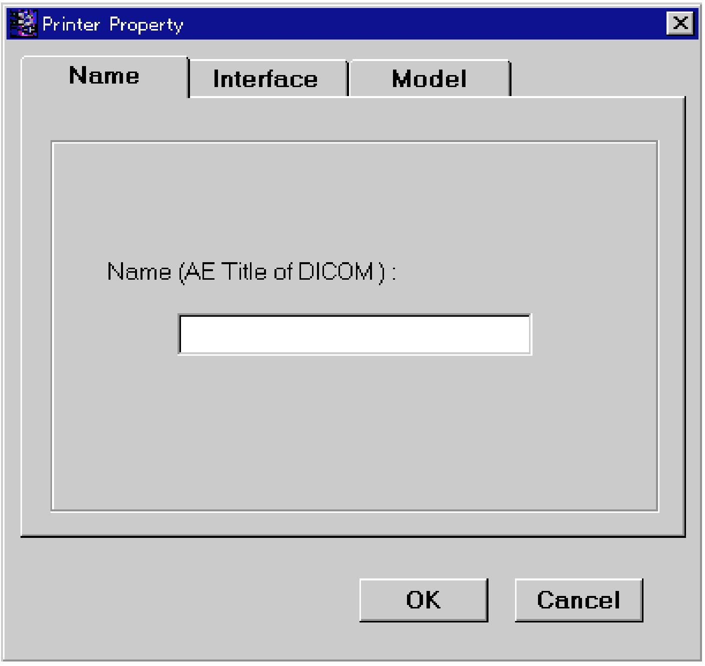
● [Name] Window

(Software ver. A00)


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

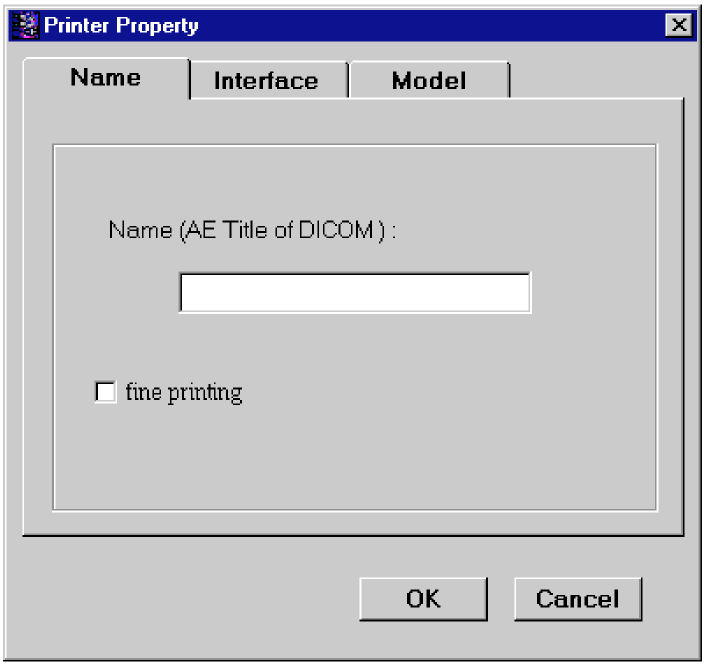
Name (AE Title of DICOM) :

(Software ver. A02 to A04)


Printer Property
Name
Interface
Model
OK
Cancel

Name (AE Title of DICOM) :

(Software ver. A05 or later)

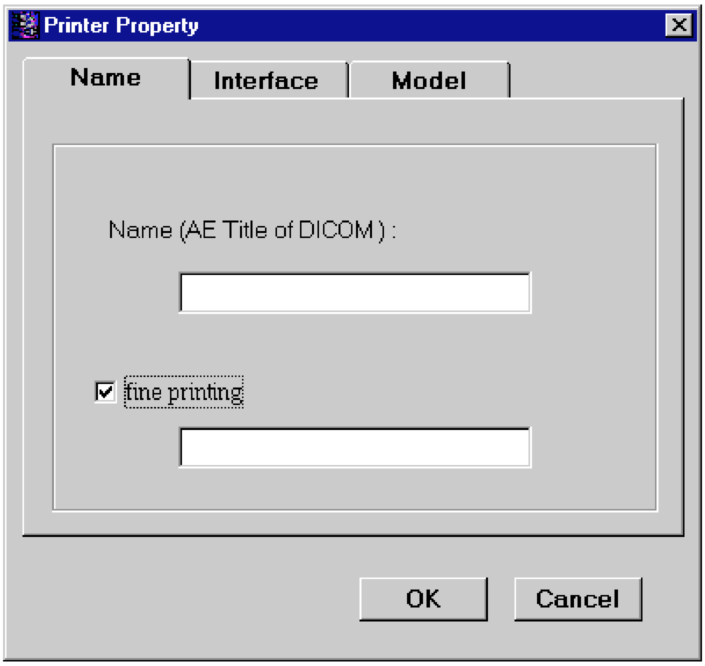


Printer Property
Name
Interface
Model
OK
Cancel

Name (AE Title of DICOM) :

☐ fine printing

(When [fine printing] is specified with software ver. A05 or later)



Printer Property
Name
Interface
Model
OK
Cancel

Name (AE Title of DICOM) :

☑ fine printing

(1) Type a name of the connected printer in the [Name (AE Title of DICOM):] field.

When DICOM protocol images are for 20 pix/mm recording by a printer with settings from software ver. A05 or later, click the [fine printing] check box. Then, enter AE Title specified for 20 pix/mm recording by DICOM client in the enter field displayed underneath [fine printing].

If viewing or modifying printer settings, the name of the printer selected from the [Printers:] list is displayed.

◆ NOTE ◆

- The printer name entered in a field [Name (AE Title of DICOM):] is displayed as the [Equipment] in the [Equip. Status] list of the [FN-PS551] window. It is also used for “ ● [Printer] Window” in the “7.5 Adding, Modifying, or Deleting a Client [Client]”.
- When the DICOM protocol is used, the printer name serves as the AE Title that identifies the printer. If [Print Server Application Entity] is set to [one to both printers] (an AE Title is assigned for the system) with the “ ● [DICOM Property] Window” in the “7.3 Adding, Modifying, or Deleting Protocols [Protocols]”, the printer name set for Printer #1 is used as an AE Title.
- The printer name must be a combination of up to 16 characters selected from the table below.
- AE Title entered for 20 pix/mm recording of DICOM protocol image should be different from AE Title entered in the [Name (AE Title of DICOM):] field. If these AE Titles are the same, 20 pix/mm recording can not be carried out. DICOM client and printer for output must also support 20 pix/mm recording.
- When 20 pix/mm recording is carried out for connecting to CR-IR348CL (for FCR5000 series console), 10pix/mm and 20 pix/mm recording are changed over according to DICOM communication information.
  Therefore, in the case of 20 pix/mm recording only from CR-IR348CL, it is acceptable to input only for [Name (AE Title of DICOM):] (it is not necessary to check the [fine printing] check box).
- [Fine printing] can be specified even if DICOM protocol is not used, however it has no effect.
- Printers that support 20 pix/mm recording.
  FM-DP L

The following characters may be used in the printer name.

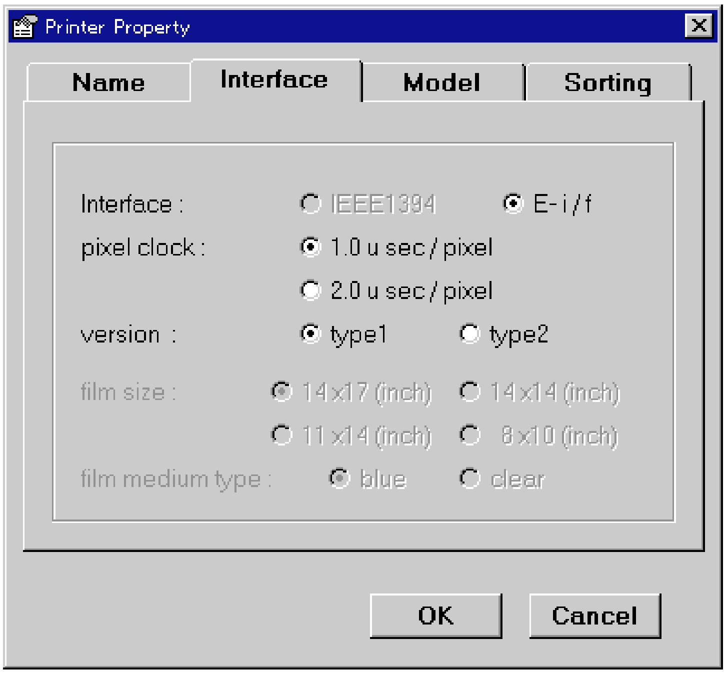
SP	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/
0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	ˆ	_
´	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	{	|	}	˜	

TP4F0027.EPS

(2) Click the [Interface] tab.
→ The [Interface] window appears.

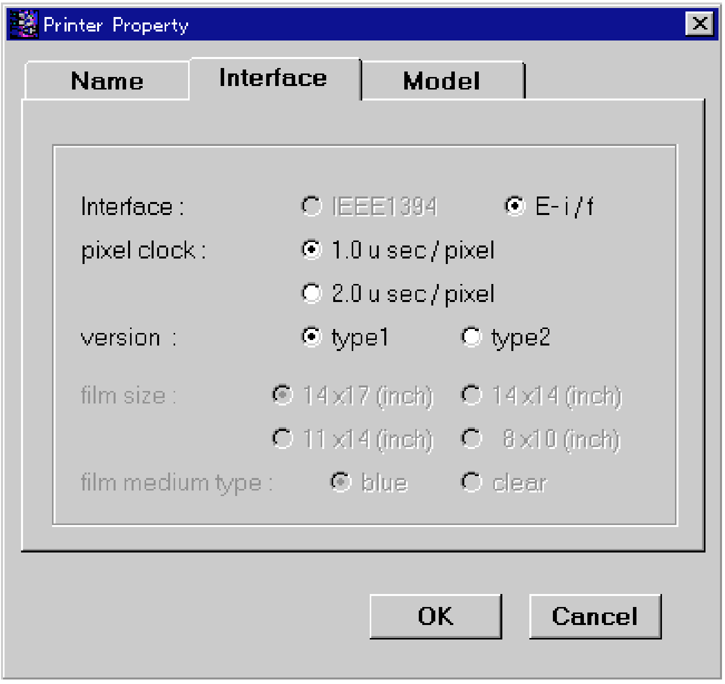
- [Interface] Window

(Software ver. A00)


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

Interface : ○ IEEE1394 ● E-i/f
pixel clock : ● 1.0 u sec / pixel
○ 2.0 u sec / pixel
version : ● type1 ○ type2
film size : ● 14x17 (inch) ○ 14x14 (inch)
○ 11x14 (inch) ○ 8x10 (inch)
film medium type : ● blue ○ clear

(Software ver. A02 or later)


Printer Property
Name
Interface
Model
OK
Cancel

Interface : ○ IEEE1394 ● E-i/f
pixel clock : ● 1.0 u sec / pixel
○ 2.0 u sec / pixel
version : ● type1 ○ type2
film size : ● 14x17 (inch) ○ 14x14 (inch)
○ 11x14 (inch) ○ 8x10 (inch)
film medium type : ● blue ○ clear

(3) Specify printer interface parameters.

- [Interface:]:
  Specifies the interface type (“E-i/f” is only currently available).
- [pixel clock:]:
  Specifies the transfer speed. For cable up to 60 m long, choose [1.0 µ sec/pixel]; for cables over 60 m, choose [2.0 µ sec/pixel].

◆ NOTE ◆

Set the transfer speed to the printers indicated below to [2.0 µ sec/pixel].
FL-IM2636N, FL-IM3543N, FL-IM3543MN
Setting to [1.0 µ sec/pixel] will cause a transfer error between the FN-PS551 and these printers.

- [version:]:
  Specifies the interface version.

The table below lists compatible printers.

Version	Type	Interface
Type 1	FL-IM D	E-i/f
	FL-IM DM	E-i/f
	FM-DP2636	E-i/f
	FM-DP3543	E-i/f
	FM-DP L	E-i/f
	DRYPIX 1000	E-i/f
	DRYPIX 3000	E-i/f
	DRYPIX Link	E-i/f
Type 2	FL-IM2636 II	E-i/f
	FL-IM3543 II	E-i/f
	FL-IM2636N	E-i/f
	FL-IM3543N	E-i/f
	FL-IM3543MN	E-i/f

TP4F0028.EPS

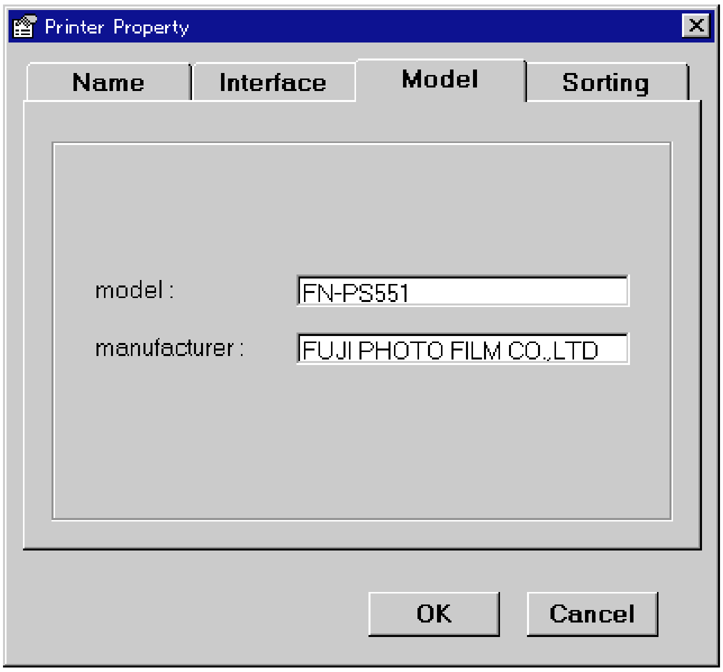
- [film size:]:
  Select either [14 x 17 (inch)] (3543), [14 x 14 (inch)] (3535) or [11 x 14 (inch)] (2636) for the printer's film size when “type 2” is selected for the printer interface version.
- [film medium type:]:
  Select either [blue] or [clear] for the film base color when “type 2” is selected for the printer interface version.

(4) Click the [Model] tab.

→ The [Model] window appears.

- [Model] Window

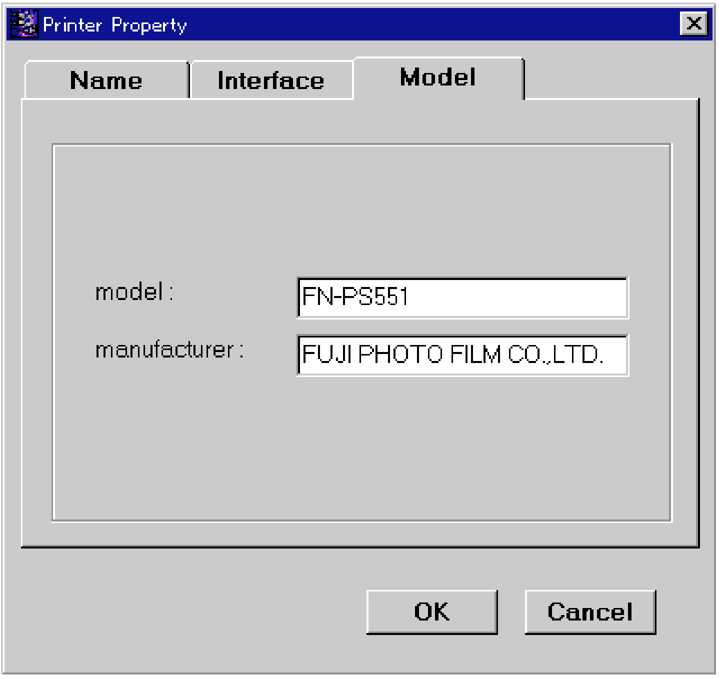
(Software ver. A00)


Printer Property
Name
Interface
Model
Sorting
OK
Cancel

model : FN-PS551

manufacturer : FUJI PHOTO FILM CO.,LTD

(Software ver. A02 or later)


Printer Property
Name
Interface
Model
OK
Cancel

model : FN-PS551

manufacturer : FUJI PHOTO FILM CO.,LTD.

(5) Enter model information in the [model:] and [manufacturer:] field.

◆ NOTE ◆

- Both of the [model:] (manufacturer's model name) and [manufacturer:] (manufacturer name) must be no more than 64 characters long. (Characters must be selected from the table in "● [Name] Window" above).
- Normally the default for the model and manufacturer names should be used ("FN-PS551" and "FUJI PHOTO FILM CO., LTD" respectively). Where multiple FN-PS551 systems are installed at a single location, each must be identified by a unique name determined in consultation with the users.
- When two printers are connected, the model information can be the same for both.
- For DICOM protocol connections, this name is used by the DICOM "Printer Name Acquisition".

(6) For software ver. A00, click the [Sorting] tab.

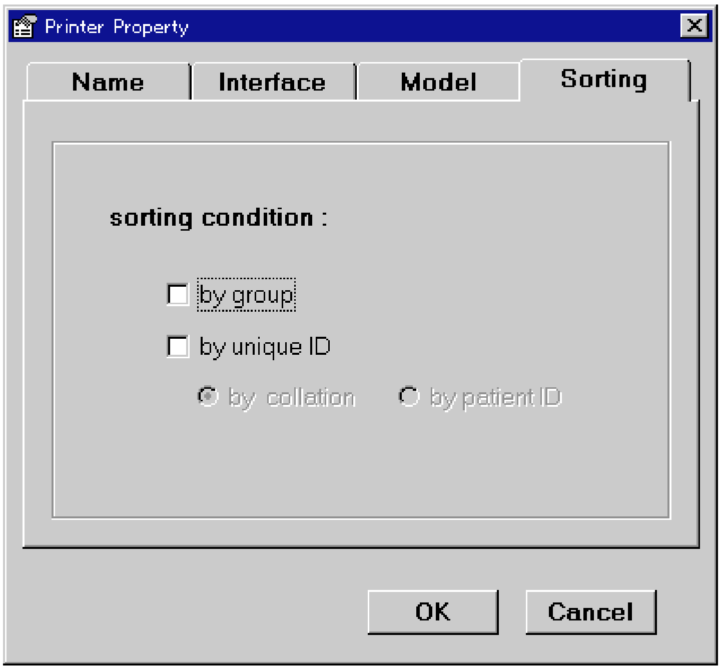
◆ NOTE ◆

For software ver. A02 or later, proceed to the step (8).

→ The [Sorting] window appears.

- [Sorting] Window

(Software ver. A00)


Printer Property
Name
Interface
Model
Sorting
sorting condition :
☐ by group
☐ by unique ID
● by collation
○ by patient ID
OK
Cancel

◆ **NOTE** ◆

For software ver. A02 or later, the [Sorting] window is moved from the [Printer Property] window to the [SERVICE UTILITY] window. Refer to the section "7.9 Setting Sorting Conditions [Sorting]" for using software ver. A02 or later.

(7) Choose sorting conditions when a printer is equipped with a sorter.

- [by group]:
  Group information from each determined protocol is sent to the printer as sorting information. The sorting conditions (specified output bins) for each group information must be specified at the printer end.
  - DICOM protocol:
    The first 10 characters of the AE Title of a client that issues a print request are the group information.
    Because the AE Title has a maximum of 16 characters, any characters exceeding the 10th character are not reflected in the group information. Therefore, if different clients have the same first 10 characters, they are not differentiated. Also, spaces will be inserted for the amount that is insufficient in AE Title not having 10 characters.
  - TOSHIBA protocol:
    The Modality Code (two characters) sent from a client that issues a print request plus 8 spaces are the group information.
    Confirm the content of the Modality Code on the client side. If different clients have the same Modality Code, they are not differentiated.

- [by unique ID] :
  This parameter is disabled (not currently available).

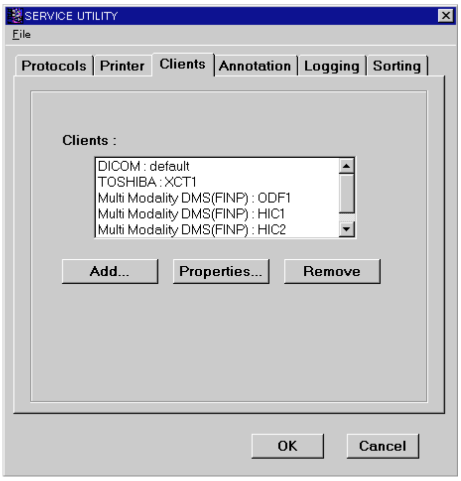
(8) When all settings have been successfully completed, click [OK].

→ The [Printer] window on the [SERVICE UTILITY] window reappears.

7.5 Adding, Modifying, or Deleting a Client [Clients]

■ [Clients] Menu Sequence

• Add client	: Click [Add...].
• View/modify client settings	: Select a client to view or modify, and then click [Properties...].
• Delete client	: Select a client to delete, and then click [Remove].


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Add...
Properties...
Remove
OK
Cancel

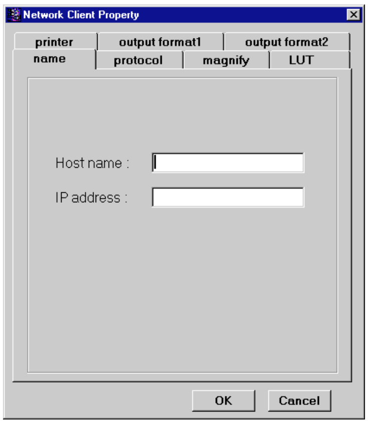
Clients :
DICOM : default
TOSHIBA : XCT1
Multi Modality DMS(FINP) : ODF1
Multi Modality DMS(FINP) : HIC1
Multi Modality DMS(FINP) : HIC2

Add...

Properties...

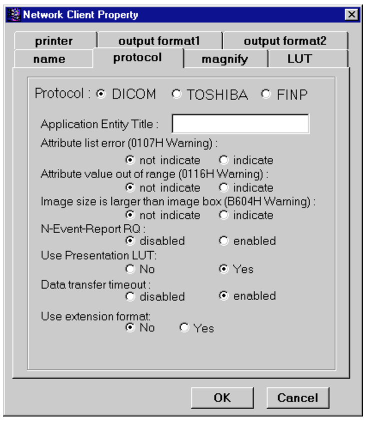
Remove

When adding a client or modifying client parameters, go through all "Network Client Property" tabs.


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

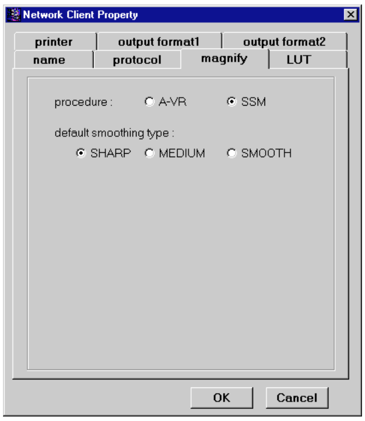
Host name :
IP address :

name


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

Protocol : ● DICOM ○ TOSHIBA ○ FINP
Application Entity Title :
Attribute list error (0107H Warning) : ● not indicate ○ indicate
Attribute value out of range (0116H Warning) : ● not indicate ○ indicate
Image size is larger than image box (B604H Warning) : ● not indicate ○ indicate
N-Event-Report RQ : ● disabled ○ enabled
Use Presentation LUT: ○ No ● Yes
Data transfer timeout : ○ disabled ● enabled
Use extension format: ● No ○ Yes

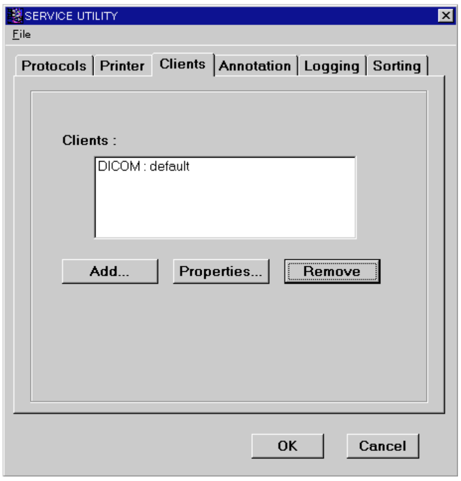
protocol


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

procedure : ○ A-VR ● SSM
default smoothing type : ● SHARP ○ MEDIUM ○ SMOOTH

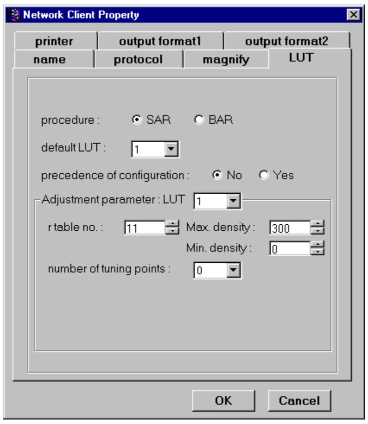
magnify

(continued next page)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Add...
Properties...
Remove
OK
Cancel

Clients :
DICOM : default

(from previous page)


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

procedure : ● SAR ○ BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

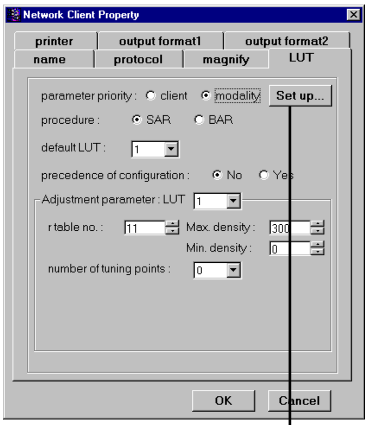
Adjustment parameter : LUT 1

r table no. : 11 Max. density : 300

Min. density : 0

number of tuning points : 0

LUT:DICOM


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
Set up...
OK
Cancel

parameter priority : ○ client ● modality

procedure : ● SAR ○ BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

Adjustment parameter : LUT 1

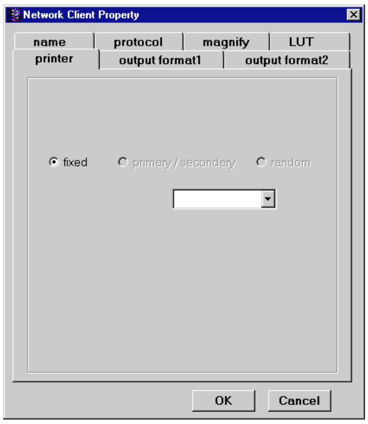
r table no. : 11 Max. density : 300

Min. density : 0

number of tuning points : 0

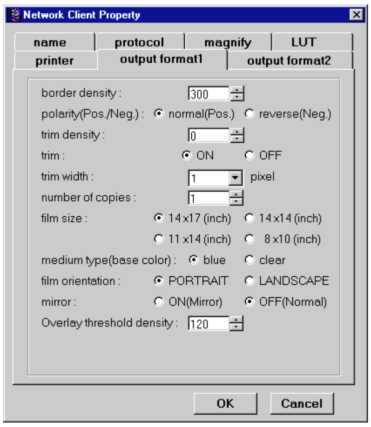
LUT:TOSHIBA

Choose "modality" from "parameter priority:", then Setup...


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

● fixed ○ primary / secondary ○ random

printer


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

border density : 300

polarity(Pos./Neg.) : ● normal(Pos.) ○ reverse(Neg.)

trim density : 0

trim : ● ON ○ OFF

trim width : 1 pixel

number of copies : 1

film size : ● 14x17 (inch) ○ 14x14 (inch) ○ 11x14 (inch) ○ 8x10 (inch)

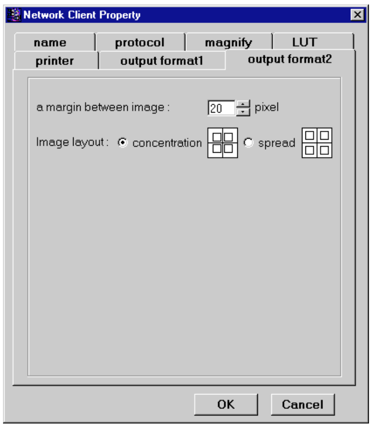
medium type(base color) : ● blue ○ clear

film orientation : ● PORTRAIT ○ LANDSCAPE

mirror : ○ ON(Mirror) ● OFF(Normal)

Overlay threshold density : 120

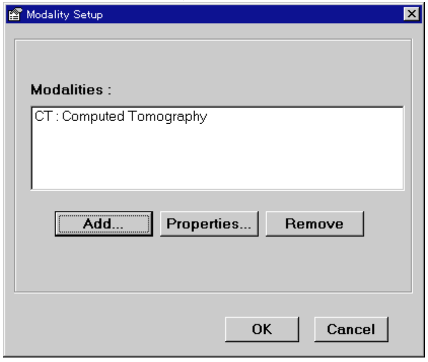
output format1 (output format for software ver. A04 or earlier)


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

a margin between image : 20 pixel

Image layout : ● concentration ○ spread

output format2 (software ver. A05 or later)


Modality Setup
Add...
Properties...
Remove
OK
Cancel

Modalities :

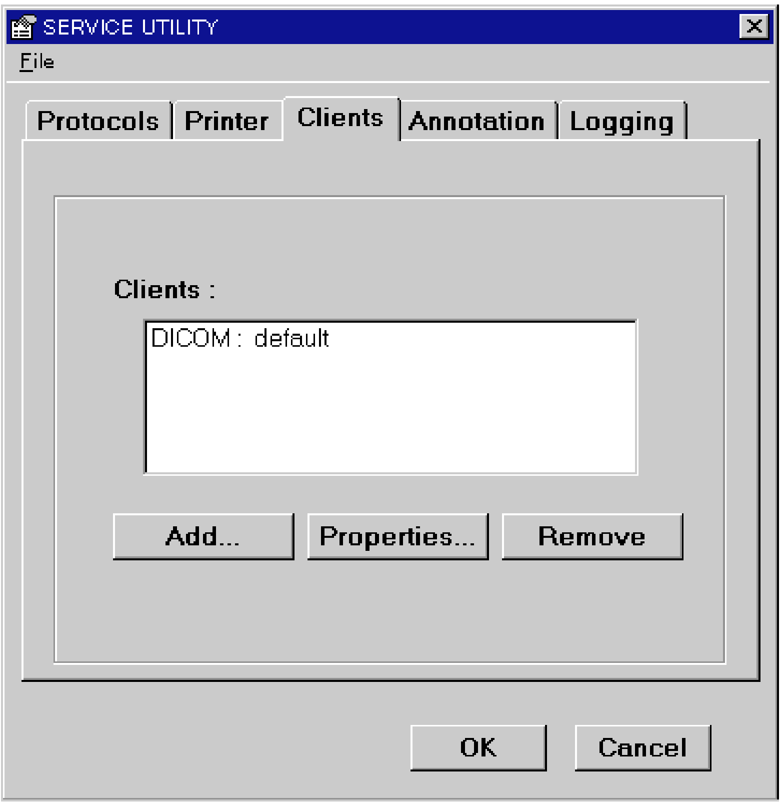
CT : Computed Tomography

Refer to "7.6 Adding, Modifying, or Deleting Modality Information".

■ Display of [Clients] Window

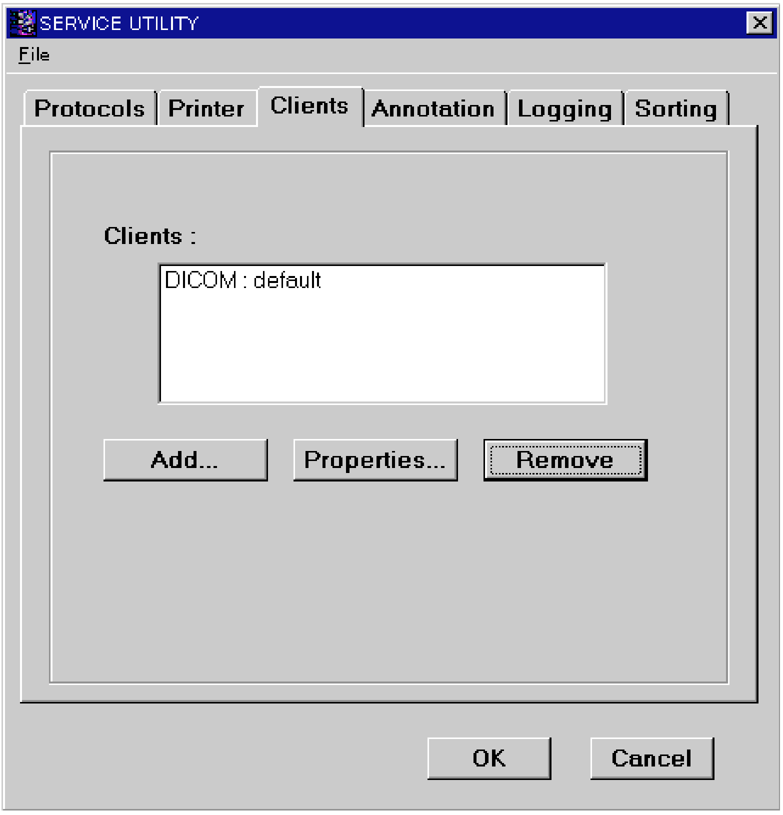
(1) From the [SERVICE UTILITY] window, click the [Clients] tab.
→ The [Clients] window appears.

(Software ver. A00)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Clients :
Add...
Properties...
Remove
OK
Cancel

DICOM : default

(Software ver. A02 or later)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Clients :
Add...
Properties...
Remove
OK
Cancel

DICOM : default

◆ NOTE ◆

- The [Clients:] list in the [Clients] window shows the host names of all currently registered clients. Note that the only "DICOM: default" setting is registered at installation (factory default).
- DICOM protocol connections use parameters in the "DICOM: default" when clients are not registered individually.
  However, for software ver. A05 or later, setting of [avail] or [inval] for "DICOM: default" function is added. When "DICOM: default" function is set to invalid, printing is not accepted from clients that are not registered individually (or if AE Title is registered incorrectly).
- All TOSHIBA and FUJI protocol connections must be registered for each individual client.
- Up to 255 connections can be registered.

● To Add a Client

(1) On the [Clients] window, click [Add...].

→ The [Network Client Property] window appears (go to "■ Using [Network Client Property] Window").

● To View and/or Modify Client Settings

(1) From the [Clients:] list of the [Clients] window, select a client to view or modify, then click [Properties...].

→ The [Network Client Property] window appears (go to "■ Using [Network Client Property] Window").

● To Delete a Registered Client

(1) From the [Clients:] list of the [Clients] window, select a client to delete, then click [Remove].

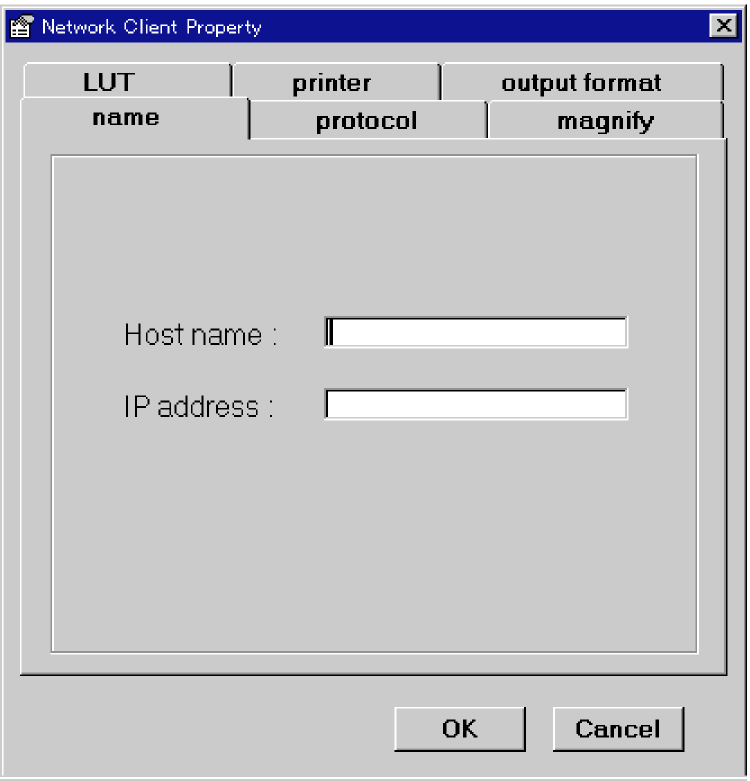
→ The selected client is deleted.

■ Using [Network Client Property] Window

◆ NOTE ◆

- The [Network Client Property] window is used to specify client parameters.
- Image processing parameters specified for each client through this window are applied when image data from clients is sent with no image processing parameter specified.
- The [Network Client Property] window has six sub-windows (seven for software ver. A05 or later). Select a window by clicking the tab at the top.
- For clients connected through FUJI protocol, specify client parameters only on the [name], [protocol] and [printer] windows (for FUJI protocol, client parameters can be specified when software ver. A03 or later is used).

- [name] Window



Host name :

IP address :

(1) Enter a host name and IP address in the [Host name:] and [IP address:] fields to identify a client.

If viewing or modifying settings in [Properties], the entries of the [Host name:] and [IP address:] correspond to the client selected in the [Client] window.

◆ NOTE ◆

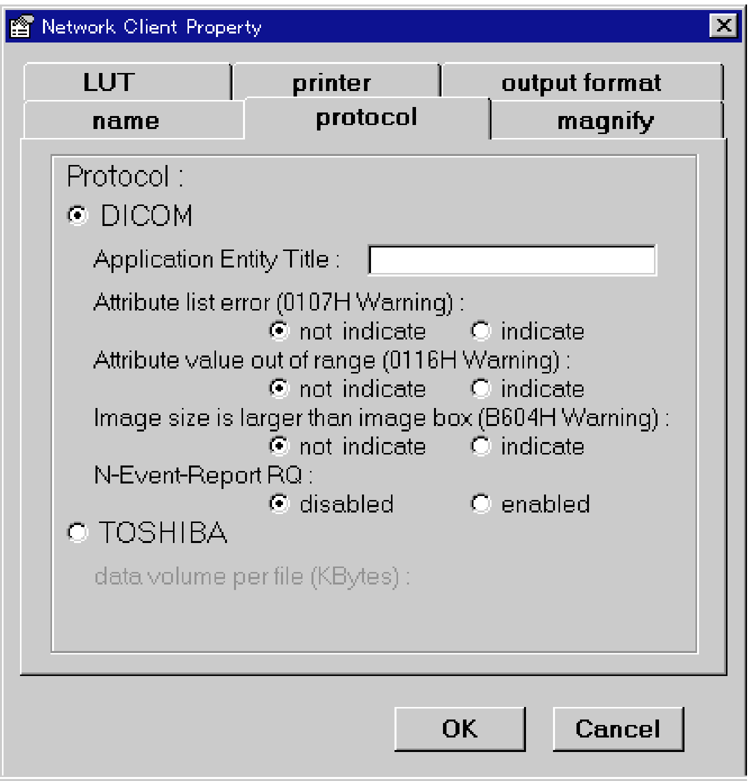
- The host name must be entered in single-byte alphanumeric characters (both upper and lower cases are accepted).
- The number of characters that can be input differs according to the software version.
    - Software version A03 or earlier:
      Input possible to a maximum of 10 characters for DICOM, TOSHIBA and FUJI protocol clients.
    - Software version A04 or later:
      Input possible to a maximum of 10 characters for DICOM and FUJI protocol clients and 16 characters for TOSHIBA protocol clients.
- If the “DICOM: default” is selected, the [Host name:] on the [name] window reads “default,” and the host name and IP address settings cannot be changed.

(2) Click the [protocol] tab.

→ The [protocol] window appears.

- [protocol] Window (adding a client)

(Software ver. A00)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :

● DICOM

Application Entity Title :

Attribute list error (0107H Warning) :
● not indicate ○ indicate

Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

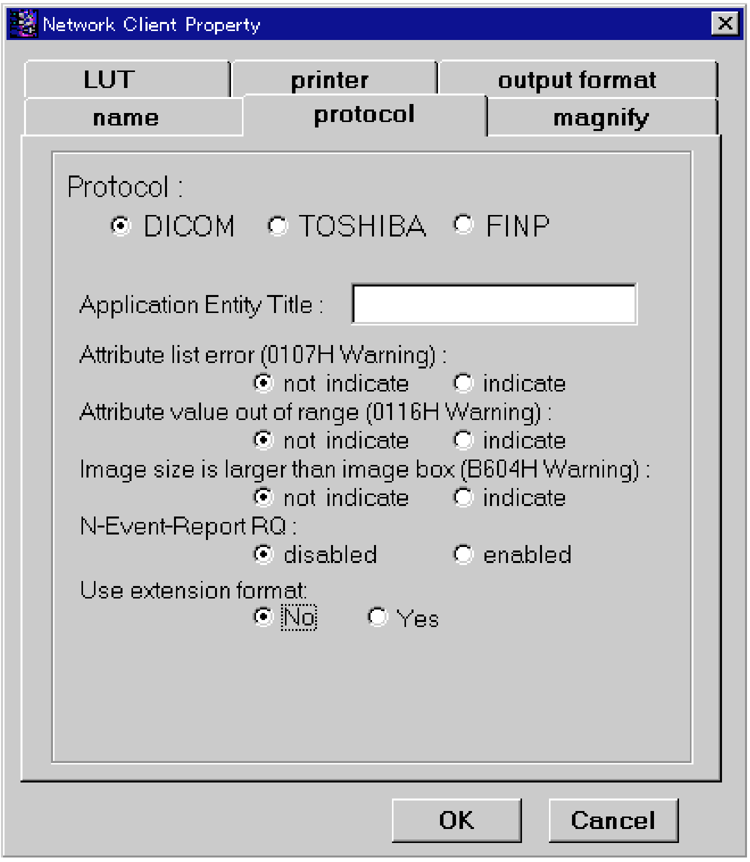
Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

○ TOSHIBA

data volume per file (KBytes) :

(Software ver. A02 to A04)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :
● DICOM ○ TOSHIBA ○ FINP

Application Entity Title :

Attribute list error (0107H Warning) :
● not indicate ○ indicate

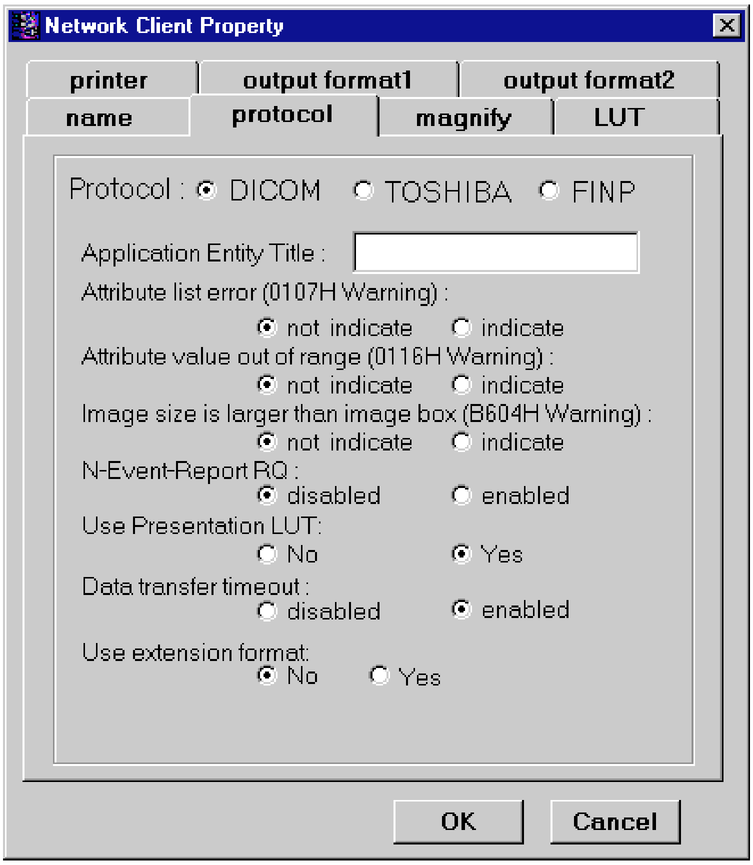
Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

Use extension format:
● No ○ Yes

(Software ver. A05 or later)


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

Protocol : ● DICOM ○ TOSHIBA ○ FINP

Application Entity Title :

Attribute list error (0107H Warning) :
● not indicate ○ indicate

Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

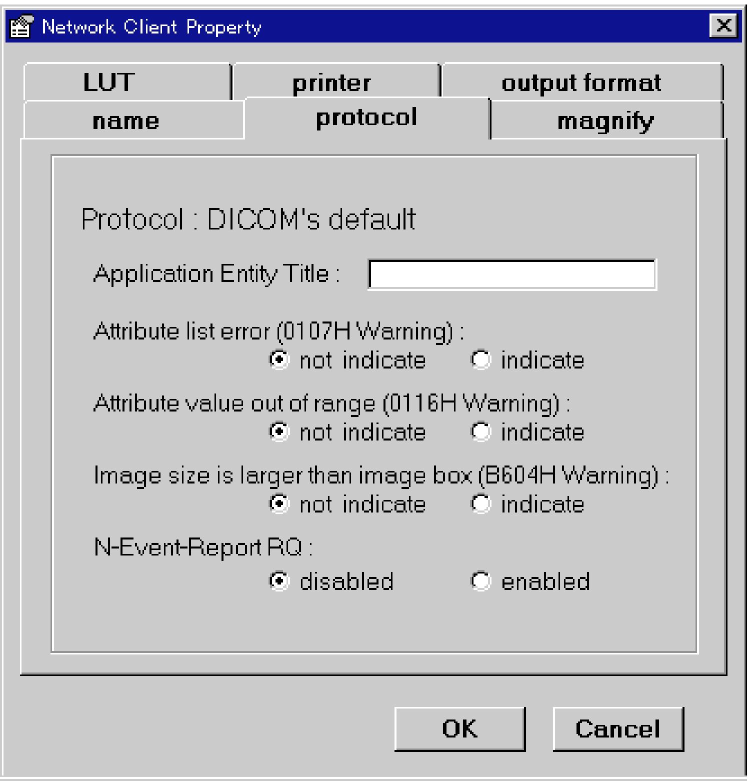
Use Presentation LUT:
○ No ● Yes

Data transfer timeout :
○ disabled ● enabled

Use extension format:
● No ○ Yes

- [protocol] Window (for “DICOM: default”)

(Software ver. A00)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol : DICOM's default

Application Entity Title :

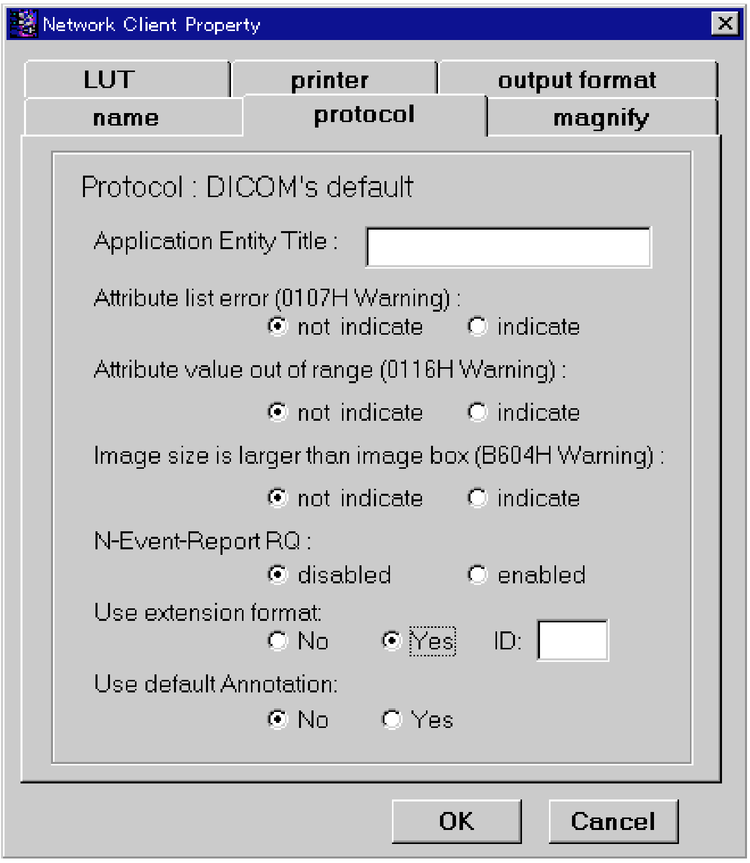
Attribute list error (0107H Warning) :
● not indicate ○ indicate

Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

(Software ver. A02 to A04)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol : DICOM's default

Application Entity Title :

Attribute list error (0107H Warning) :
● not indicate ○ indicate

Attribute value out of range (0116H Warning) :
● not indicate ○ indicate

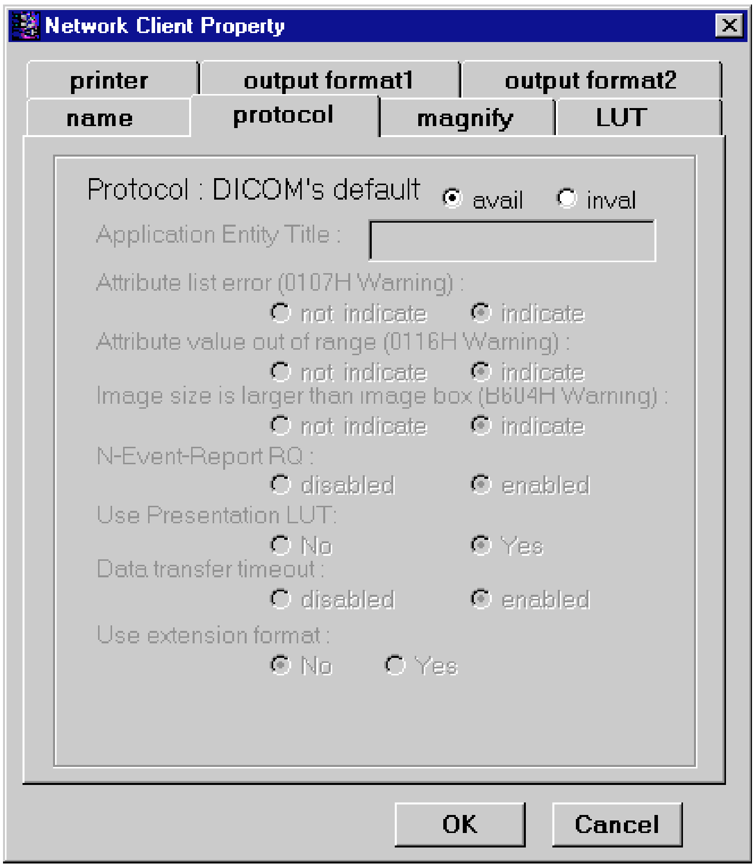
Image size is larger than image box (B604H Warning) :
● not indicate ○ indicate

N-Event-Report RQ :
● disabled ○ enabled

Use extension format:
○ No ● Yes ID:

Use default Annotation:
● No ○ Yes

(Software ver. A05 or later)


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

Protocol : DICOM's default ● avail ○ inval

Application Entity Title :

Attribute list error (0107H Warning) :
○ not indicate ● indicate

Attribute value out of range (0116H Warning) :
○ not indicate ● indicate

Image size is larger than image box (B604H Warning) :
○ not indicate ● indicate

N-Event-Report RQ :
○ disabled ● enabled

Use Presentation LUT :
○ No ● Yes

Data transfer timeout :
○ disabled ● enabled

Use extension format :
● No ○ Yes

(3) From the [protocol] window, select the protocol ([DICOM], [TOSHIBA] or [FINP]) for the relevant client.

◆ NOTE ◆

- For [DICOM], go to step (4).
- For [TOSHIBA], go to step (5).
- For [FINP] with software ver. A03 or later, go to step (6).
- When setting “DICOM: default”, separate setting window is displayed for [protocol] window, however, setting is not necessary for all parameters. Settings can be made (setting is not possible with software ver. A05 or later), but the following contents are set by internal process. Some of the contents are different from the displayed default values.

• [Application Entity Title:]:	No relevance to “DICOM: default”
• [Attribute list error:]:	[indicate](sends an error message)
• [Attribute value out of range:]:	[indicate](sends an error message)
• [Image size is larger than image box:]:	[indicate](sends an error message)
• [N-Event-Report RQ:]:	[enabled](sends a response)
• [Use Presentation LUT:]:	[Yes](use LUT content sent by client) (supporting software ver. A05 or later)
• [Data transfer timeout:]:	[enabled](timeout) (supporting software ver. A05 or later)
• [Use extension format:]:	[No](Not used)

For software ver. A05 or later, [avail] (available, default) or [inval] (invalid) is set for the “DICOM: default” function.

(4) For the DICOM protocol connection, set the following parameters.

- [Application Entity Title:]:
  Enter an AE Title that identifies a client (up to 16 single-byte characters).
- [Attribute list error:]:
  This parameter specifies the response to unexpected transmission errors ([not indicate] (default) ignores errors, [indicate] sends an error message).
- [Attribute value out of range:]:
  This parameter specifies the response to out-of-range date errors ([not indicate] (default) ignores errors, [indicate] sends an error message).
- [Image size is larger than image box:]:
  BIB N-SET (image data receiving in frames) uses reduction to fit oversized images into the image frame. This parameter specifies whether to issue notification that reduction has been used ([not indicate] (default) sends no notification, [indicate] sends an error message).
- [N-Event-Report RQ:]:
  This parameter specifies whether to respond to N-Event-Report requests ([disabled] (default) send no response, [enabled] sends a response).

- [Use Presentation LUT:] (supporting software ver. A05 or later):
  For Presentation LUT information sent by client, choose either [No] (use LUT content set for FN-PS551) or [Yes] (use LUT content sent by client, default). If print is not output with expected tone using LUT information sent by client, adjust to output print with proper tone using LUT setting of FN-PS551.
- [Data transfer timeout:] (supporting software ver. A05 or later):
  For [Timeout:] (setting timeout value for communication) set by [DICOM Property] window of [Protocols] tab, choose either [disabled] (ignore timeout) or [enabled] (timeout, default).
- [Use extension format:] (supporting software ver. A02 or later):
  Choose [Yes] to use the specialized extension format for a particular client. Choose [No] (default) when clients shown below are not connected.
  If [Yes] is selected, enter an ID in the [ID:] field to identify extension formats used by clients shown in the following table.

Manufacture	Model	ID	Use default annotation
Philips	Easy Vision	EV	No
HITACHI Medico	DR2000 Series	HM	No
	Clavis View	HM	If user requires Annotation output set using the service utility of FN-PS551, select [Yes], otherwise select [No].
Fuji Photo Film	QA-WS771	CR	No
	HI-C655	CR	No
	CR-IR346CL (Console for FCR XG-1)	CR	No
	CR-IR348CL (Console for FCR 5000 series)	CR	No
	Synapse	CR	No

TP4F0032.EPS

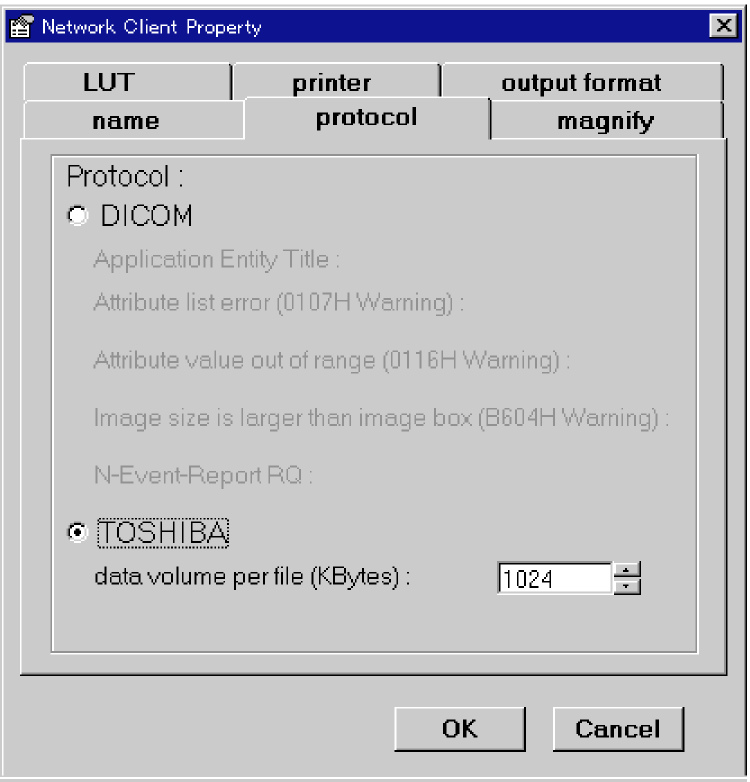
- [Use default annotation:] (supporting software ver. A02 or later):
  This parameter appears only when [Yes] is selected in the [Use extension format:] described above. If using the [Annotation] set in the service utility, choose [Yes]. If not, choose [No] (default).

◆ NOTE ◆

The parameters shown above should be set according to the data included in the Setting List of the relevant model in the [Modality Connection List].

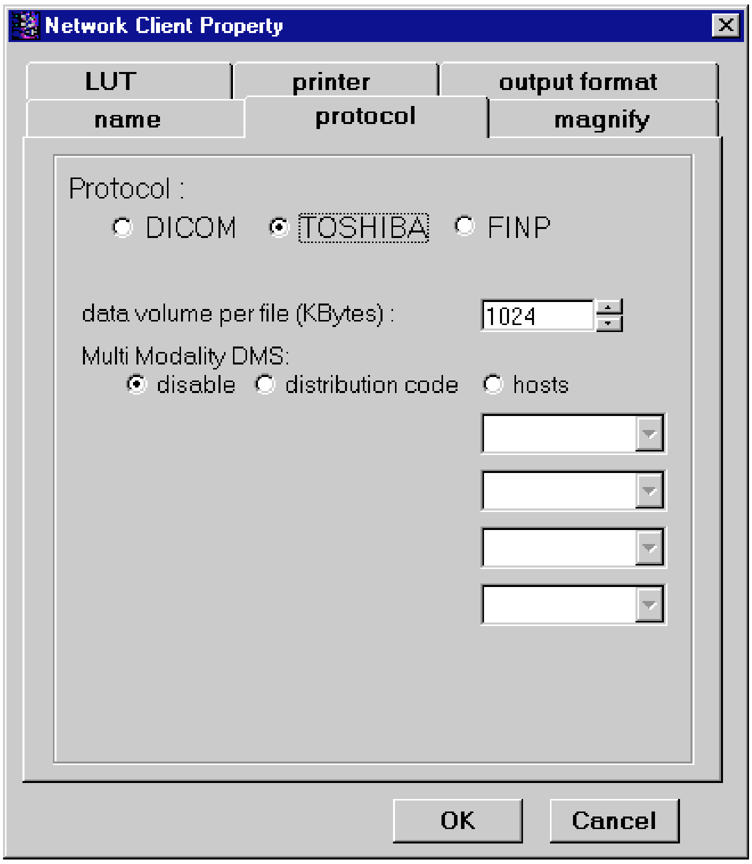
(5) For the TOSHIBA protocol connection, set the following parameters.

(Software ver. A00)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :
○ DICOM
Application Entity Title :
Attribute list error (0107H Warning) :
Attribute value out of range (0116H Warning) :
Image size is larger than image box (B604H Warning) :
N-Event-Report RQ :
● TOSHIBA
data volume per file (KBytes) : 1024

(Software ver. A02 or later)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :
○ DICOM ● TOSHIBA ○ FINP

data volume per file (KBytes) : 1024

Multi Modality DMS:
● disable ○ distribution code ○ hosts

- [data volume per file (KBytes):]:
  Enter the maximum data volume (in kilobytes) for each film received from clients. The default value is 1024.

◆ NOTE ◆

How to calculate the data volume for a file:
{(image data size × no. of bytes per pixel) + overlay data size} × maximum number of frames / 1024 + 16 KB

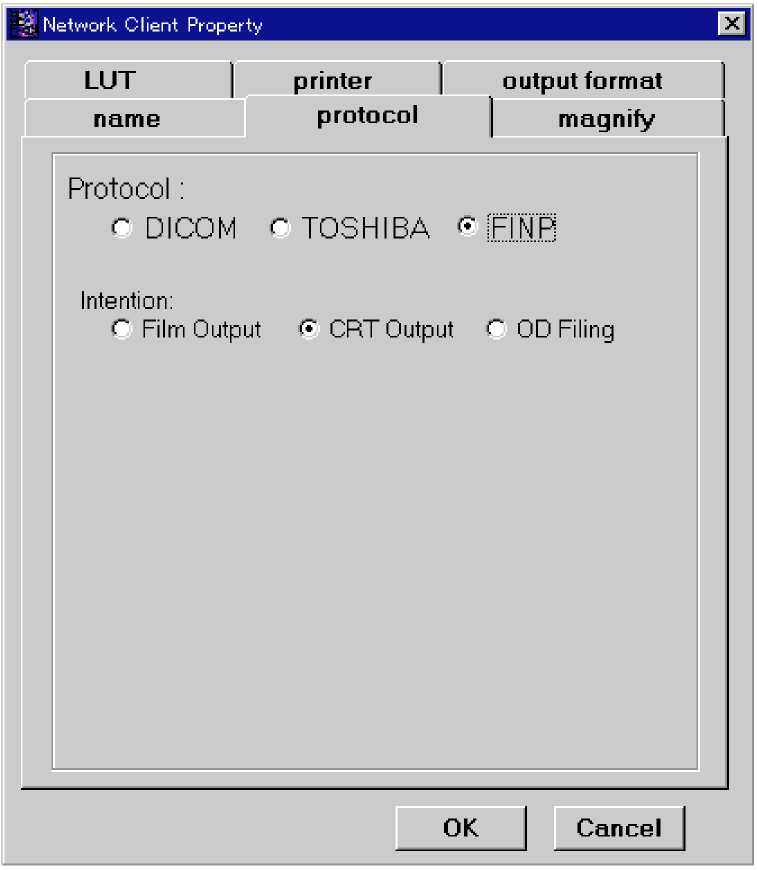
- Bytes per pixel:
  - Up to 8 bits per pixel division: 1 byte
  - Over 8 bits per pixel division: 2 bytes
- Overlay data size
  - Overlay data size / 8 (due to stored bit = 1)
  - This value is not required if there is no overlay data.
- Dividing by 1024 (in above expression) converts from byte to KB.
- 16 KB (in above expression) represents the data area consistently required for storing image data.

(Example)
Image data size = 1024 × 1024
Bytes per pixel = 10 bits per pixel division, i.e., 2 bytes
Overlay data size = 1024 × 1024 / 8
Maximum number of frames = 20
Thus, {(1024 × 1024 × 2) + (1024 × 1024 / 8)} × 20 / 1024 + 16 = 43,536 KB

- [Multi Modality DMS:]:
  This parameter is disabled (not currently available). The value “disable” is only valid. The other values are not selectable.

(6) For the FUJI protocol (FINP) connection, set the following parameters (supporting software ver. A03 or later).

(Software ver. A02 or later)


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

Protocol :
○ DICOM ○ TOSHIBA ● FINP

Intention:
○ Film Output ● CRT Output ○ OD Filing

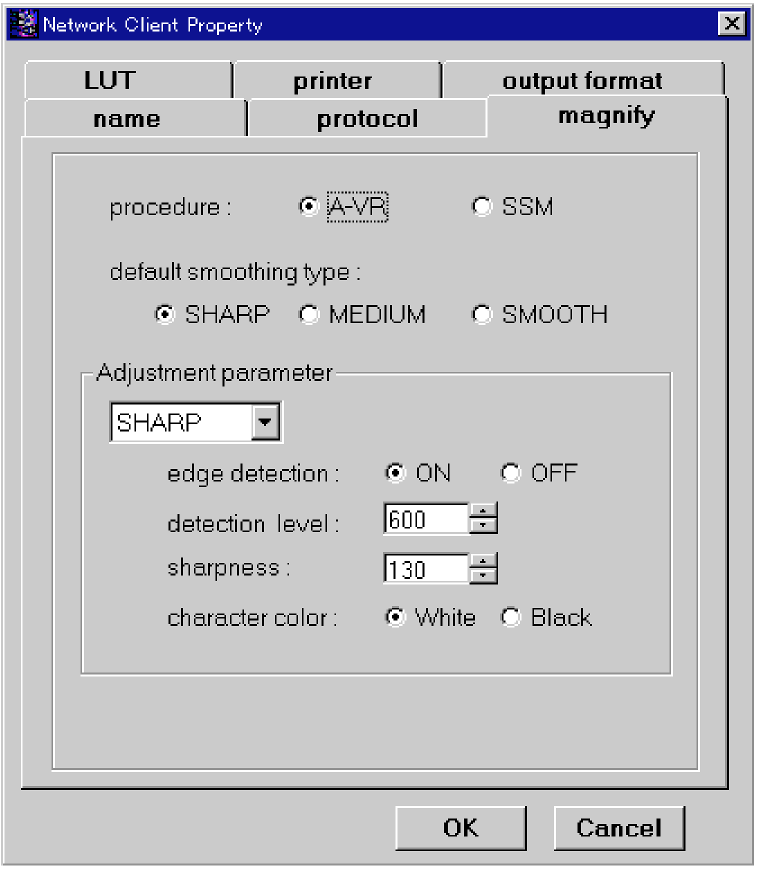
◆ NOTE ◆

The [FINP] in the [protocol] window is available with software ver. A03 or later although it appears even with software ver. A02 or later.

- [Intention:]:
  From the [Intention:], specify the particular use of a client to register.
  - [Film Output] : Film output device
    FCR 5000 series, FCR XG1
  - [CRT Output] : Image display device
    HI-C 654/655
    QA-WS771
  - [OD Filing] : OD filing device
    OD-F 614/614L/624/624L

(7) Click the [magnify] tab.
→ The [magnify] window appears.

- [magnify] Window


Network Client Property
LUT
printer
output format
name
protocol
magnify
OK
Cancel

procedure : ● A-VR ○ SSM

default smoothing type :
● SHARP ○ MEDIUM ○ SMOOTH

Adjustment parameter
SHARP
edge detection : ● ON ○ OFF
detection level : 600
sharpness : 130
character color : ● White ○ Black

(8) In the [procedure:], choose [A-VR] or [SSM] for the enlargement/reduction processing method.

◆ NOTE ◆

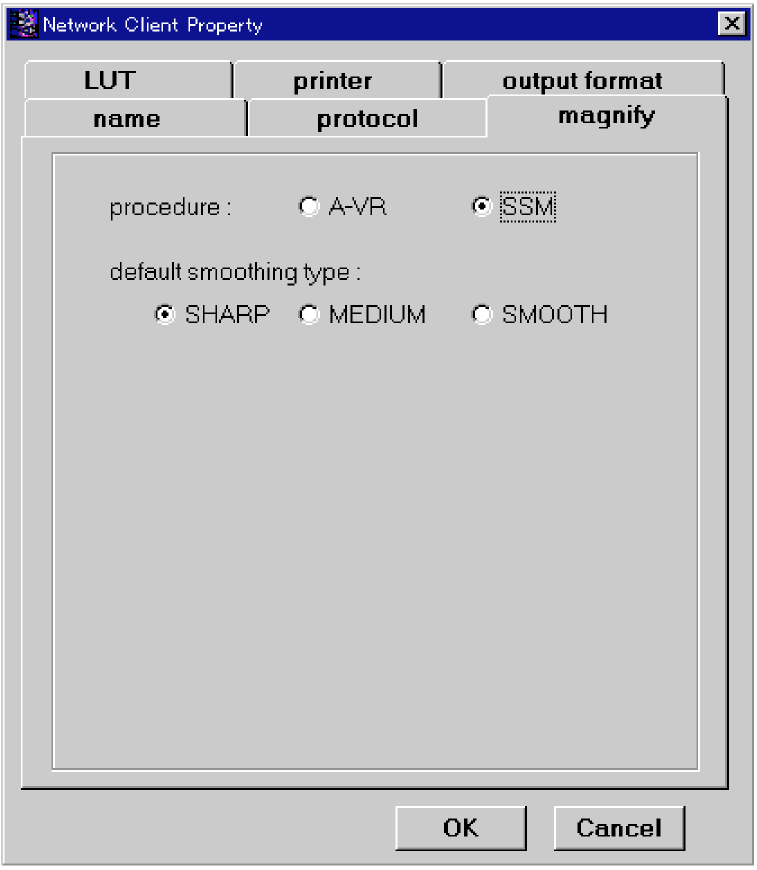
- For [A-VR], go to step (9).
- For [SSM], go to step (10).

(9) For the A-VR method, choose [SHARP], [MEDIUM] or [SMOOTH] mode for the [default smoothing type:]. Then specify the “Adjustment parameter” (fine tuning) for each of these three modes.

- [edge detection:]:
  If using the edge enlargement/reduction processing, choose [ON]. If not, choose [OFF].
- [detection level:]:
  Specify the edge detection level value in the range of 1 to 1,023.
- [sharpness:]:
  Specify the sharpness adjustment parameter in the range of -70 to 300.
- [character color:]:
  Choose [White] or [Black] for the continuous emphasis density settings flag (the color specified for characters).

(10) For the SSM method, specify a mode in the [default smoothing type:].

- Choose [SHARP], [MEDIUM] or [SMOOTH] mode for the [default smoothing type:].



procedure : ○ A-VR ● SSM

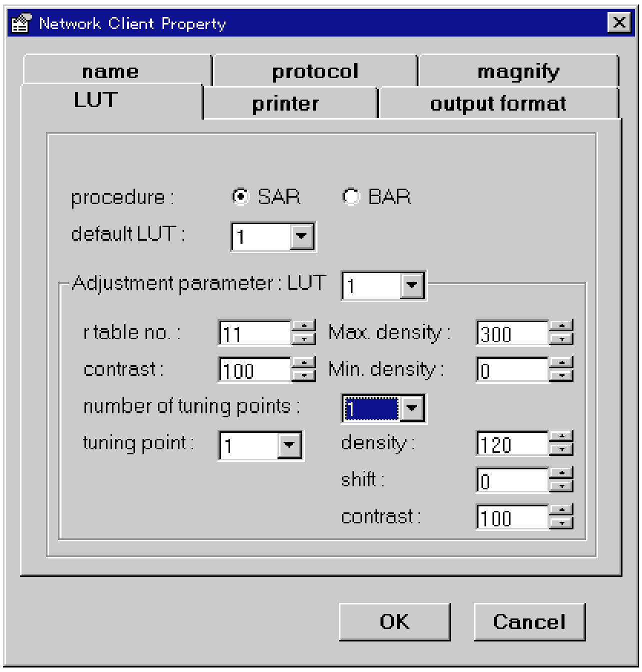
default smoothing type :
● SHARP ○ MEDIUM ○ SMOOTH

(11) Click the [LUT] tab.

→ The [LUT] window appears.

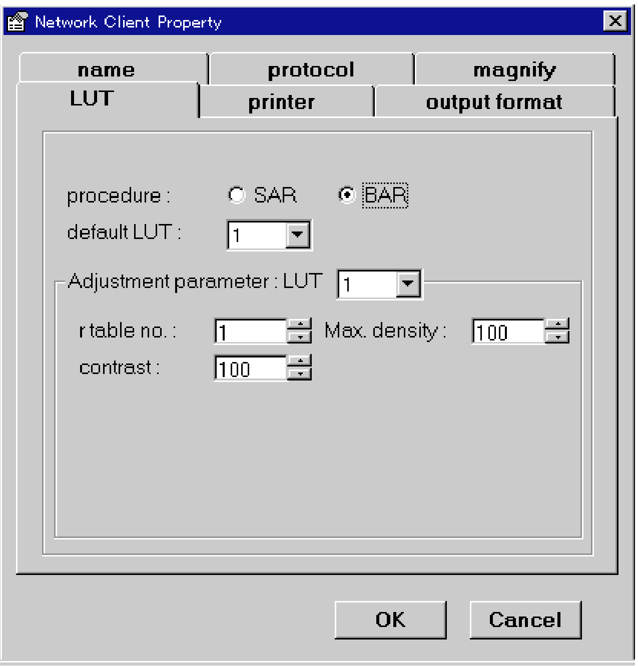
- [LUT] Window (DICOM protocol for software ver. A03 or earlier)

When [SAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

procedure : ● SAR ○ BAR
default LUT : 1
Adjustment parameter : LUT 1
r table no. : 11 Max. density : 300
contrast : 100 Min. density : 0
number of tuning points : 1
tuning point : 1 density : 120
shift : 0
contrast : 100

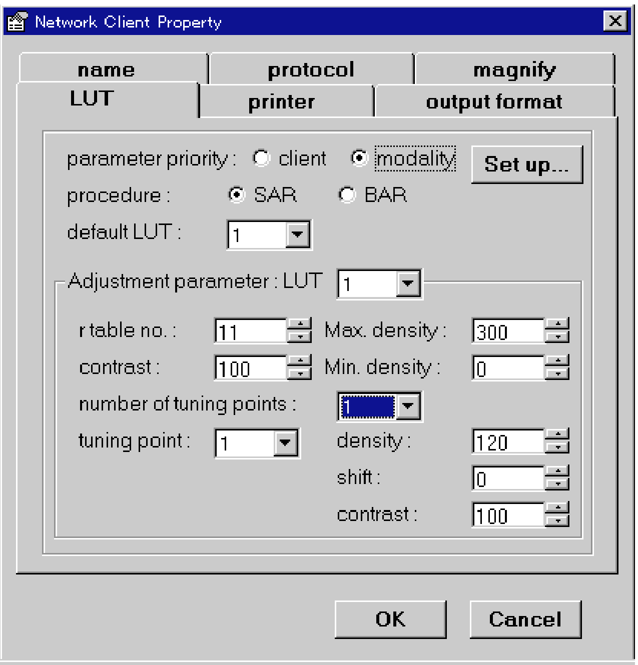
When [BAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

procedure : ○ SAR ● BAR
default LUT : 1
Adjustment parameter : LUT 1
r table no. : 1 Max. density : 100
contrast : 100

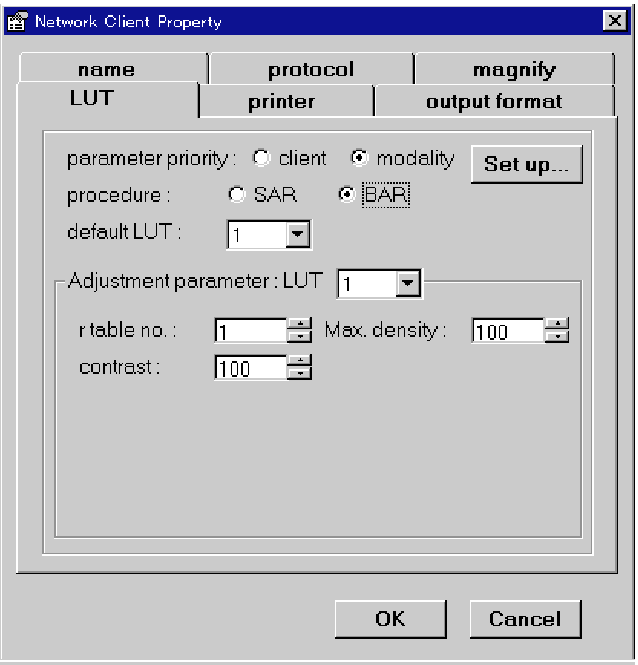
- [LUT] Window (TOSHIBA protocol for software ver. A03 or earlier)

When [SAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
Set up...
OK
Cancel

parameter priority : ○ client ● modality
procedure : ● SAR ○ BAR
default LUT : 1
Adjustment parameter : LUT 1
r table no. : 11 Max. density : 300
contrast : 100 Min. density : 0
number of tuning points : 1
tuning point : 1 density : 120
shift : 0
contrast : 100

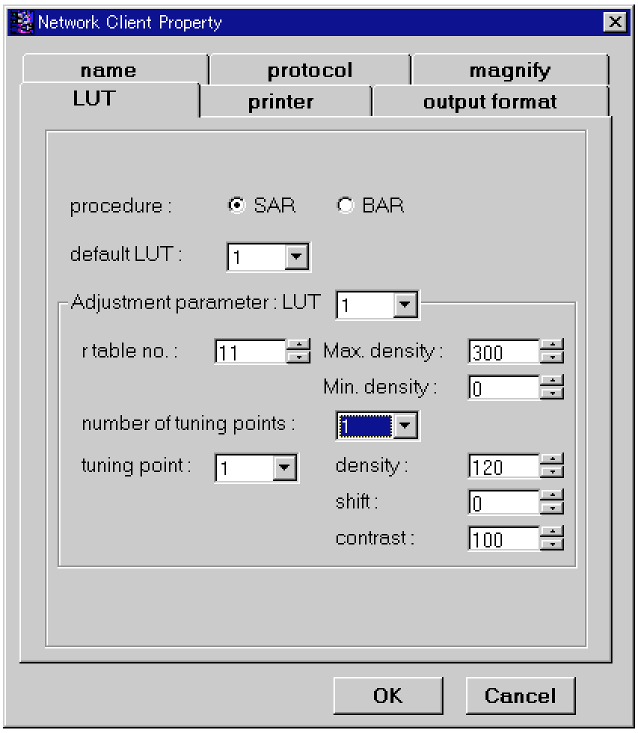
When [BAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
Set up...
OK
Cancel

parameter priority : ○ client ● modality
procedure : ○ SAR ● BAR
default LUT : 1
Adjustment parameter : LUT 1
r table no. : 1 Max. density : 100
contrast : 100

- [LUT] Window (DICOM protocol for software ver. A04 to A06)

When [SAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

procedure : ● SAR ○ BAR

default LUT : 1

Adjustment parameter : LUT 1

r table no. : 11

Max. density : 300

Min. density : 0

number of tuning points : 1

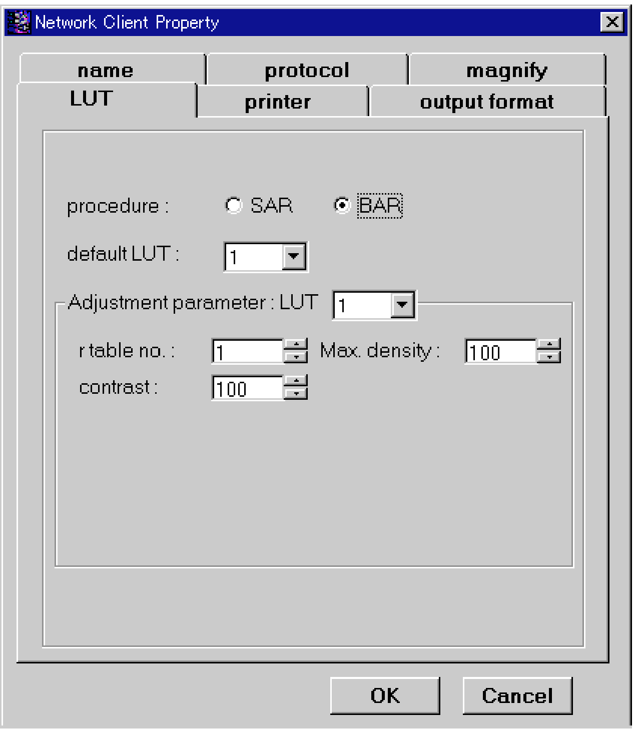
tuning point : 1

density : 120

shift : 0

contrast : 100

When [BAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

procedure : ○ SAR ● BAR

default LUT : 1

Adjustment parameter : LUT 1

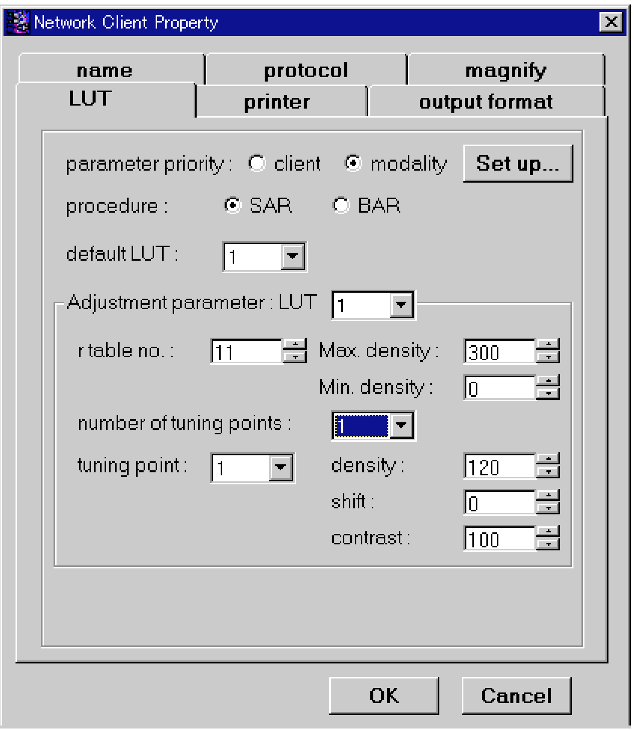
r table no. : 1

Max. density : 100

contrast : 100

- [LUT] Window (TOSHIBA protocol for software ver. A04 to A06)

When [SAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
Set up...
OK
Cancel

parameter priority : ○ client ● modality

procedure : ● SAR ○ BAR

default LUT : 1

Adjustment parameter : LUT 1

r table no. : 11

Max. density : 300

Min. density : 0

number of tuning points : 1

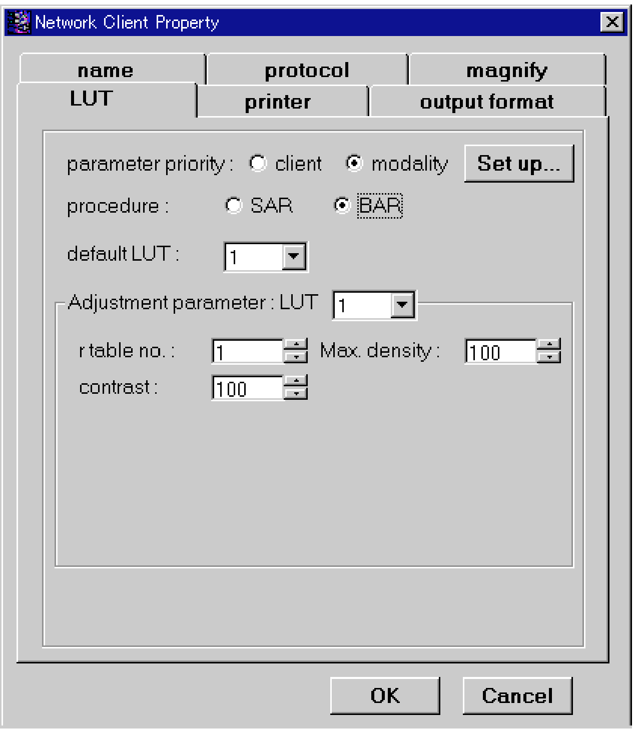
tuning point : 1

density : 120

shift : 0

contrast : 100

When [BAR] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
Set up...
OK
Cancel

parameter priority : ○ client ● modality

procedure : ○ SAR ● BAR

default LUT : 1

Adjustment parameter : LUT 1

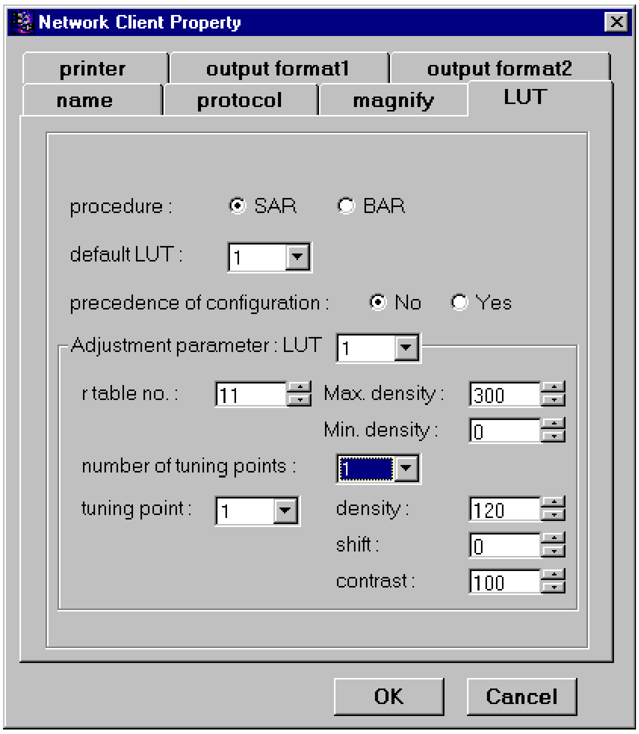
r table no. : 1

Max. density : 100

contrast : 100

- [LUT] Window (DICOM protocol for software ver. A07 or later)

When [SAR] is selected


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

procedure : ● SAR ○ BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

Adjustment parameter : LUT 1

r table no. : 11 Max. density : 300

Min. density : 0

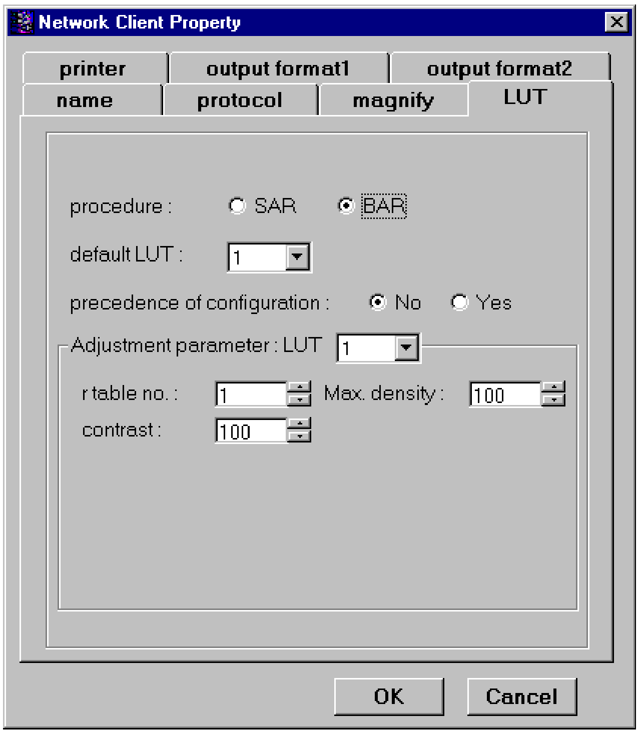
number of tuning points : 1

tuning point : 1 density : 120

shift : 0

contrast : 100

When [BAR] is selected


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
OK
Cancel

procedure : ○ SAR ● BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

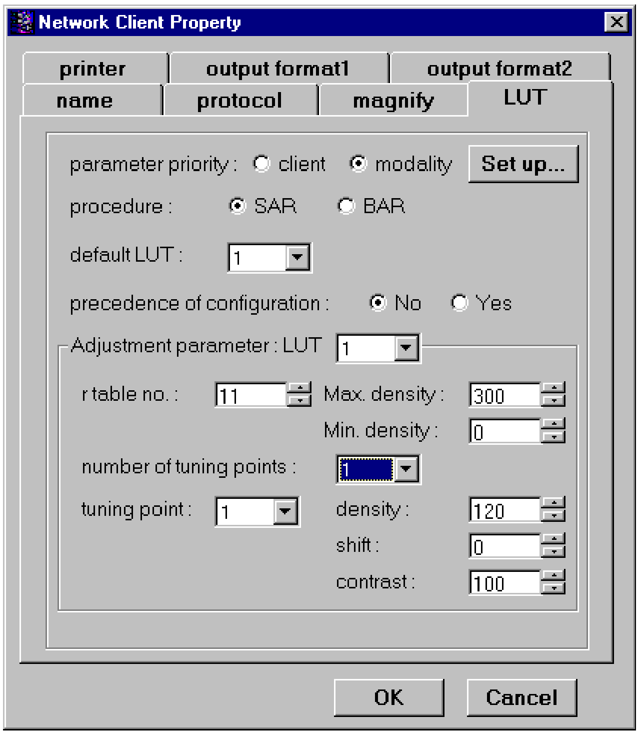
Adjustment parameter : LUT 1

r table no. : 1 Max. density : 100

contrast : 100

- [LUT] Window (TOSHIBA protocol for software ver. A07 or later)

When [SAR] is selected


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
Set up...
OK
Cancel

parameter priority : ○ client ● modality

procedure : ● SAR ○ BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

Adjustment parameter : LUT 1

r table no. : 11 Max. density : 300

Min. density : 0

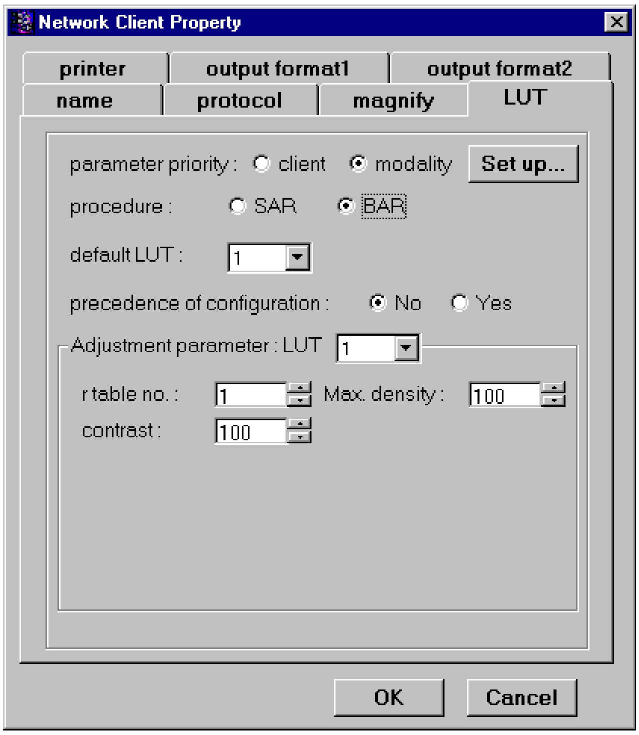
number of tuning points : 1

tuning point : 1 density : 120

shift : 0

contrast : 100

When [BAR] is selected


Network Client Property
printer
output format1
output format2
name
protocol
magnify
LUT
Set up...
OK
Cancel

parameter priority : ○ client ● modality

procedure : ○ SAR ● BAR

default LUT : 1

precedence of configuration : ● No ○ Yes

Adjustment parameter : LUT 1

r table no. : 1 Max. density : 100

contrast : 100

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◆ NOTE ◆

- Refer to “Chapter 2 Service Utility - Additional Instructions 1. Supplementary Explanation for Setting LUT Content” in the “FN-PS551 Service Manual-Appendix” for details (gamma table, etc.) on each of the parameters used by the following LUT settings.
- On the FN-PS551 application, it is set not to perform tone correction processing when setting gamma table No. 49 for SAR (used when connecting to QA-WS771 with the DICOM protocol). Therefore, parameters such as density and contrast are unaffected.
- Gamma table No.36 for SAR (supporting software ver. A05 or later) is used if expected tone is not obtained when outputting print from a DICOM client that sends tone corrected images.

(12) Specify default settings for the following tone correction processing parameters.

- [parameter priority:] (only for TOSHIBA protocol):
  Give a high priority to client-dependent ([client]) or modality-dependent ([modality]) image processing parameters when transmitted data contains modality information.
  Choose [modality], then click [Setup...] to display the [Modality Setup] window. See also “7.6 Adding, Modifying, or Deleting Modality Information [Modality Setup]”.
  Even if [modality] is selected, it is required to specify all tone correction processing parameters on this [LUT] window.

- [procedure:]:
  Specify either [SAR] or [BAR] mode for the tone correction processing.
- [default LUT:]:
  Specify the default LUT number in the range of 1 to 8.
- [precedence of configuration:] (supporting software ver. A07 or later):
  Specify use of the value sent from a client ([No], default value) or use of the value set by FN-PS551 service utility ([Yes]) for the Max. density/Min. density.

- [Adjustment parameter: LUT]:
  Specify the following parameters for each LUT number (1 to 8) listed in the drop-down list.

• [γ table no.:]:	For SAR, range = 11 to 50. For BAR, range = 1 to 20.
• [Max. density:]:	For SAR, specify the maximum density in multiples of 100 × actual value (range = 0 to 300). For BAR, specify the maximum density by percentage (range = 1 to 100).
• [contrast:]:	Specify the contrast in multiples of 100 × actual value (range = 10 to 400). Also, this contrast setting does not exist for SAR on software version A04 or later.
• [Min. density:]:	For SAR, specify the minimum density in multiples of 100 × actual value (range = 0 to 300). (Note: The value of the minimum density must be lower than that of the maximum density.) For BAR, the minimum density setting is not required.

For the SAR method, the following settings are also required for the tone correction curve tuning (if used).

- [number of tuning points:]:
  Specify the number of tuning points in the range of 0 to 5. The following values must be set for each tuning point when the number of tuning points is set to 1 or more.

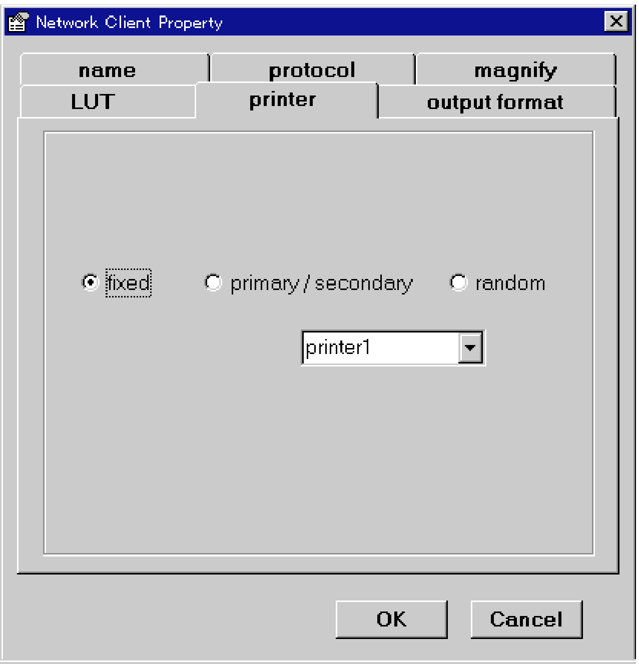
• [density:]:	Specify the tuning density in multiples of 100 (range = 0 to 300). Follow the rule of minimum density<density<maximum density.
• [shift:]:	Specify the shift density in multiples of 100 (range = -100 to 100). Follow the rule of minimum density<density ± shift <maximum density.
• [contrast:]:	Specify the contrast at the tuning point in multiples of 100 (range = 10 to 400).

(13) Click the [printer] tab.

→ The [printer] window appears.

- [printer] Window (Software ver. A06 or earlier)

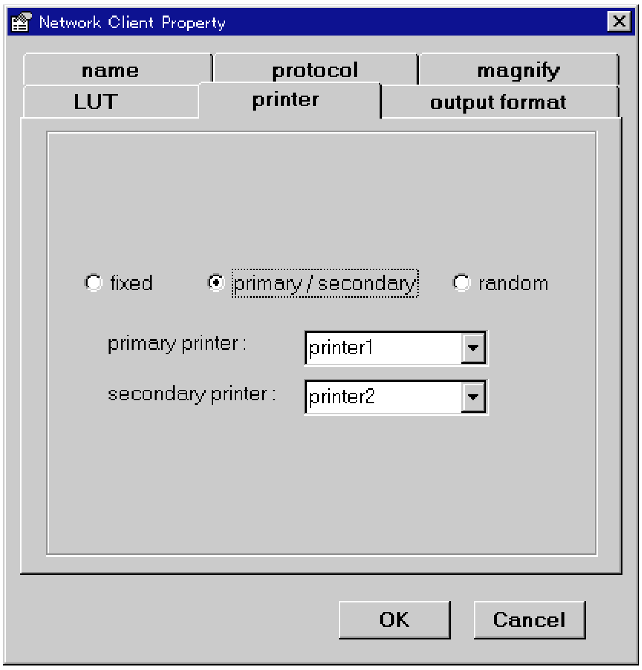
When [fixed] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

● fixed ○ primary / secondary ○ random

printer1

When [primary/secondary] is selected

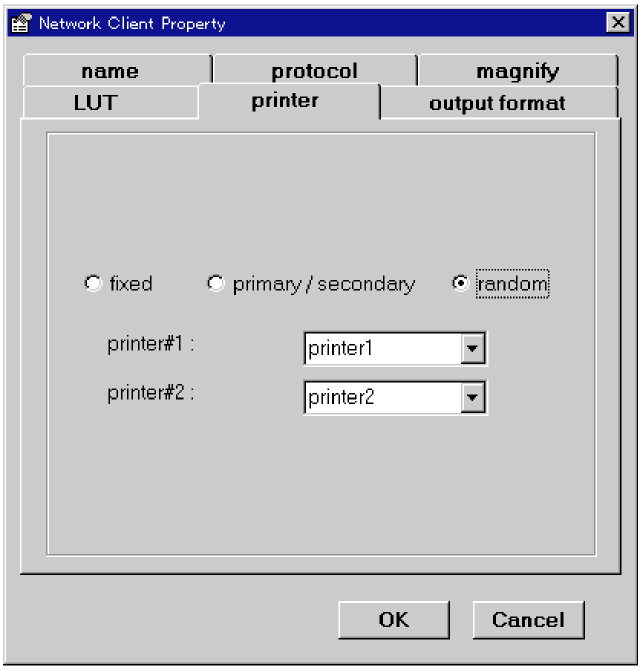

Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

○ fixed ● primary / secondary ○ random

primary printer : printer1

secondary printer : printer2

When [random] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

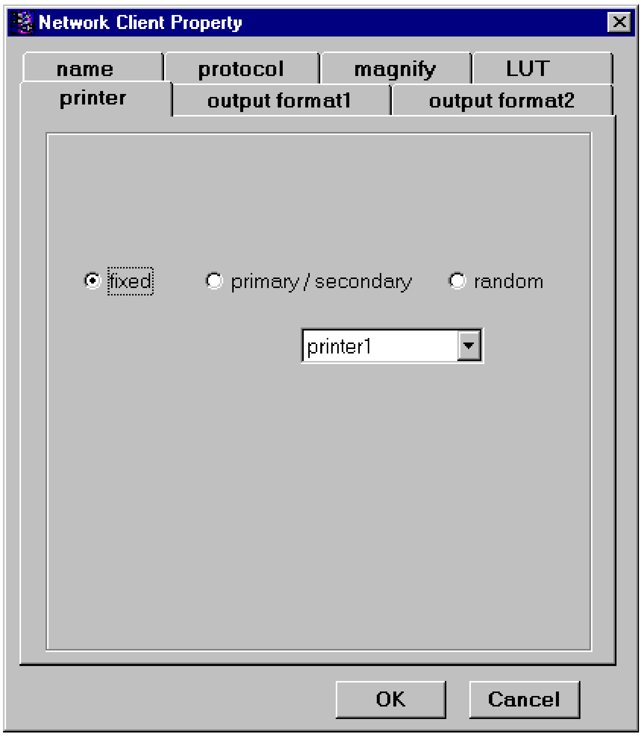
○ fixed ○ primary / secondary ● random

printer#1 : printer1

printer#2 : printer2

- [printer] Window (Software ver. A07 or later)

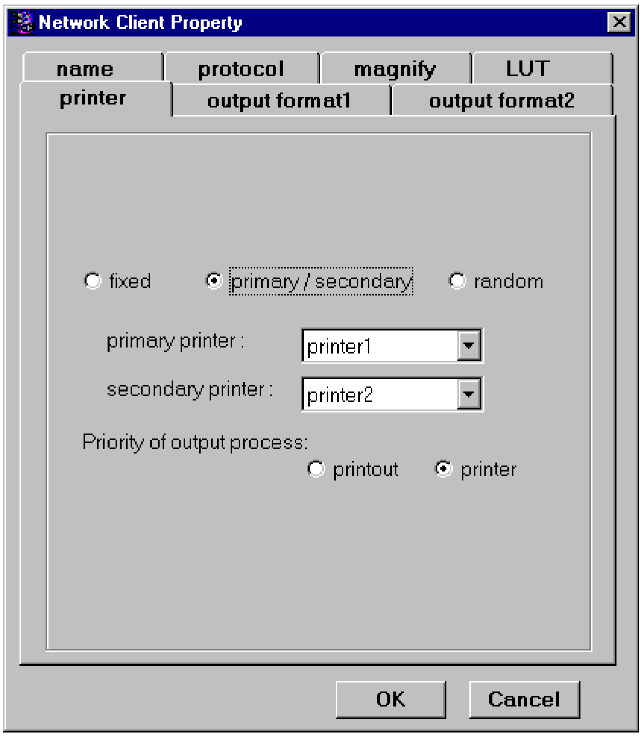
When [fixed] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

● fixed ○ primary / secondary ○ random

printer1

When [primary/secondary] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

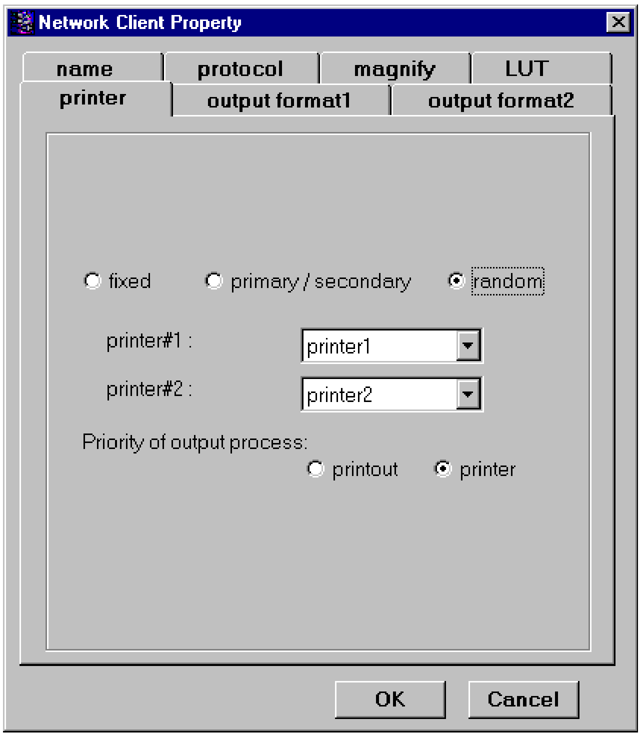
○ fixed ● primary / secondary ○ random

primary printer : printer1

secondary printer : printer2

Priority of output process:
○ printout ● printer

When [random] is selected


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

○ fixed ○ primary / secondary ● random

printer#1 : printer1

printer#2 : printer2

Priority of output process:
○ printout ● printer

(14) Specify client-dependent default settings for the output printer.

- [fixed]:
  All print requests from the designated client are always passed to the designated printer.
  Choose a printer from the drop-down list box.
- [primary/secondary]:
  Two printers can be designated as a primary and secondary so that the secondary printer takes over a printing job when the primary printer is unavailable.
  Choose primary and secondary printers from the drop-down list box.
- [random]:
  Two printers can be specified at random so that the printer which is idle at the time executes a printing job after both status of them is checked.
  Choose the first printer ("printer #1") and second printer ("printer #2") from the drop-down list box.
- [Priority of output process] (supporting software ver. A07 or later):
  Specify alternative processing method if output printer is in utility status (film empty or in operation by a user, etc.) when [primary/secondary] or [random] is selected.

• [printer]:	Stand-by for recovery from utility status (same process for Software up to A06, default value).
• [printout]:	Change over output to another printer immediately.

◆ NOTE ◆

- Before choosing a printer or printers, check that they are registered as described in the section "7.4 Adding, Modifying, or Deleting a Printer". Note that the [primary/secondary] and [random] options are available only when two printers are registered.
- If clients possibly specify the slide format, the [fixed] option should be used.
- [fixed] option must be selected and the printer registered as the Printer #1 (the printer which is connected to the first printer interface board) must be specified for the output printer setting of the DICOM protocol client when [Print Server Application Entity] is set to [one to each printer] (an AE Title is assigned for each printer) with the " ● [DICOM Property] Window" in the "7.3 Adding, Modifying, or Deleting Protocols [Protocols]". (The setting made here is meaningless since the print output is performed to the printer specified with the AE Title; however, this procedure cannot be ended unless the setting is made.)
  If [one to both printers] (an AE Title is assigned for the system) is set, or for a TOSHIBA protocol client or a FUJI protocol client, the print output is performed to the printer set here.

(15) Click the [output format] tab.

→ The [output format] window appears.

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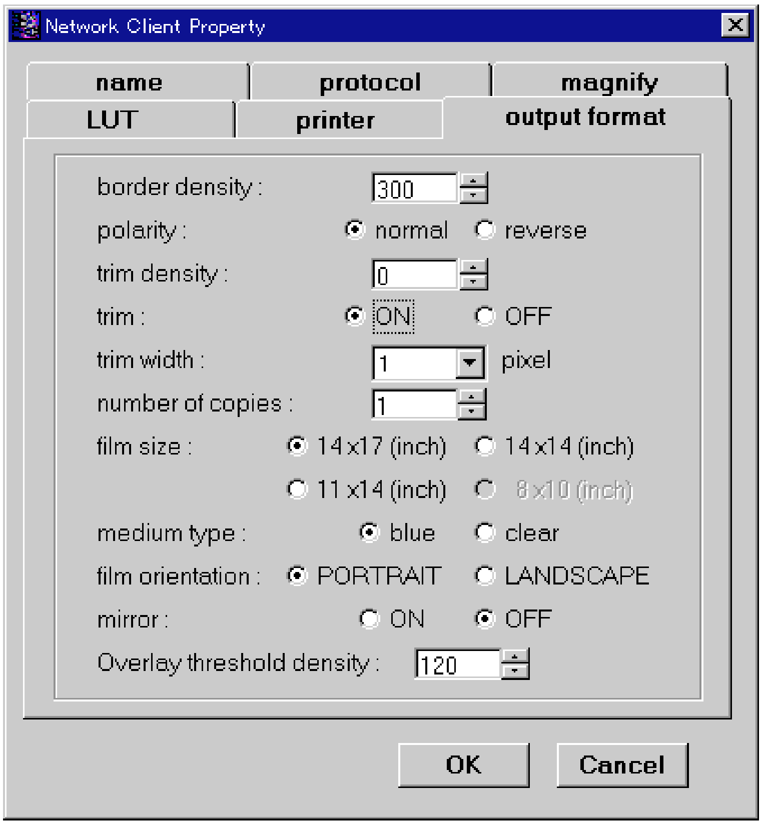
- [output format] Window

(Software ver. A00)


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

border density : 300

polarity : ● normal ○ reverse

trim density : 0

trim : ● ON ○ OFF

trim width : 1 pixel

number of copies : 1

film size : ● 14x17 (inch) ○ 14x14 (inch)
○ 11x14 (inch) ○ 8x10 (inch)

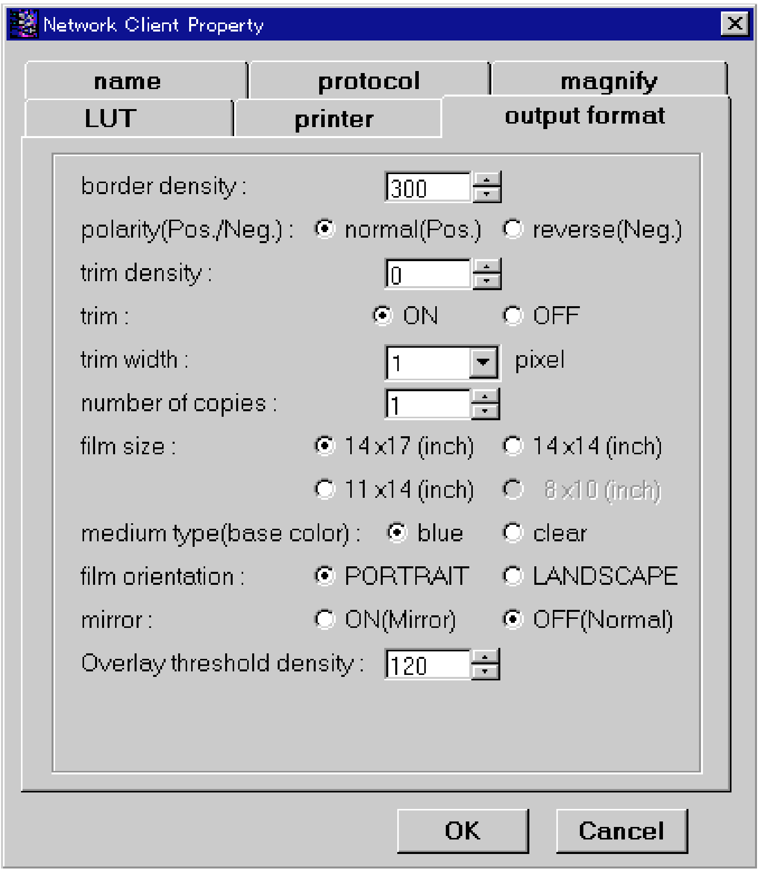
medium type : ● blue ○ clear

film orientation : ● PORTRAIT ○ LANDSCAPE

mirror : ○ ON ● OFF

Overlay threshold density : 120

(Software ver. A02 to A04)


Network Client Property
name
protocol
magnify
LUT
printer
output format
OK
Cancel

border density : 300

polarity(Pos./Neg.) : ● normal(Pos.) ○ reverse(Neg.)

trim density : 0

trim : ● ON ○ OFF

trim width : 1 pixel

number of copies : 1

film size : ● 14x17 (inch) ○ 14x14 (inch)
○ 11x14 (inch) ○ 8x10 (inch)

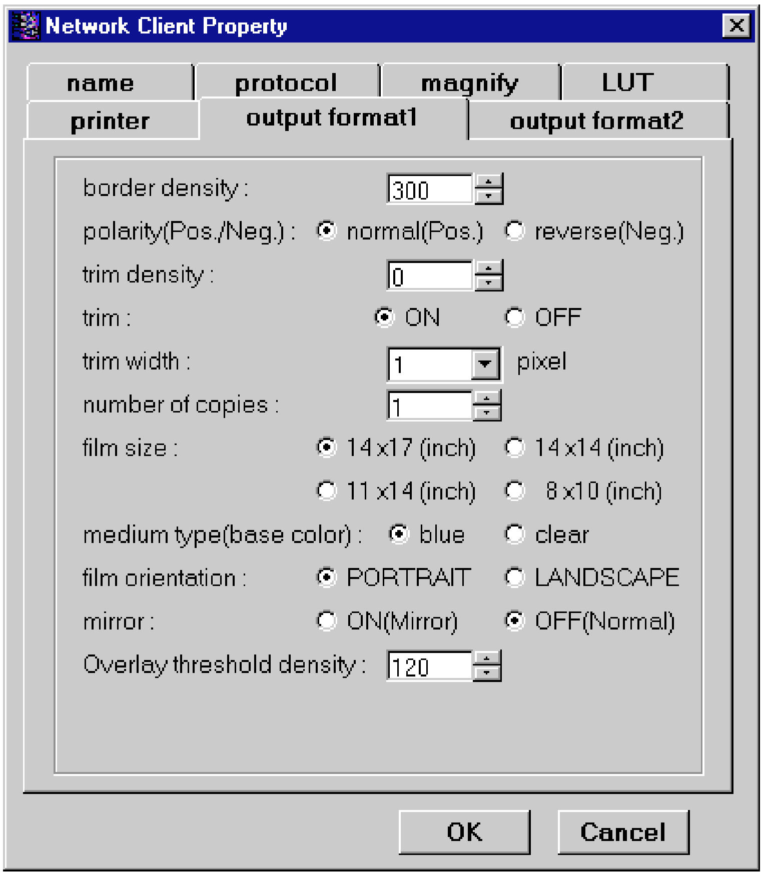
medium type(base color) : ● blue ○ clear

film orientation : ● PORTRAIT ○ LANDSCAPE

mirror : ○ ON(Mirror) ● OFF(Normal)

Overlay threshold density : 120

([output format1] for software ver. A05 or later)


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

border density : 300

polarity(Pos./Neg.) : ● normal(Pos.) ○ reverse(Neg.)

trim density : 0

trim : ● ON ○ OFF

trim width : 1 pixel

number of copies : 1

film size : ● 14x17 (inch) ○ 14x14 (inch)
○ 11x14 (inch) ○ 8x10 (inch)

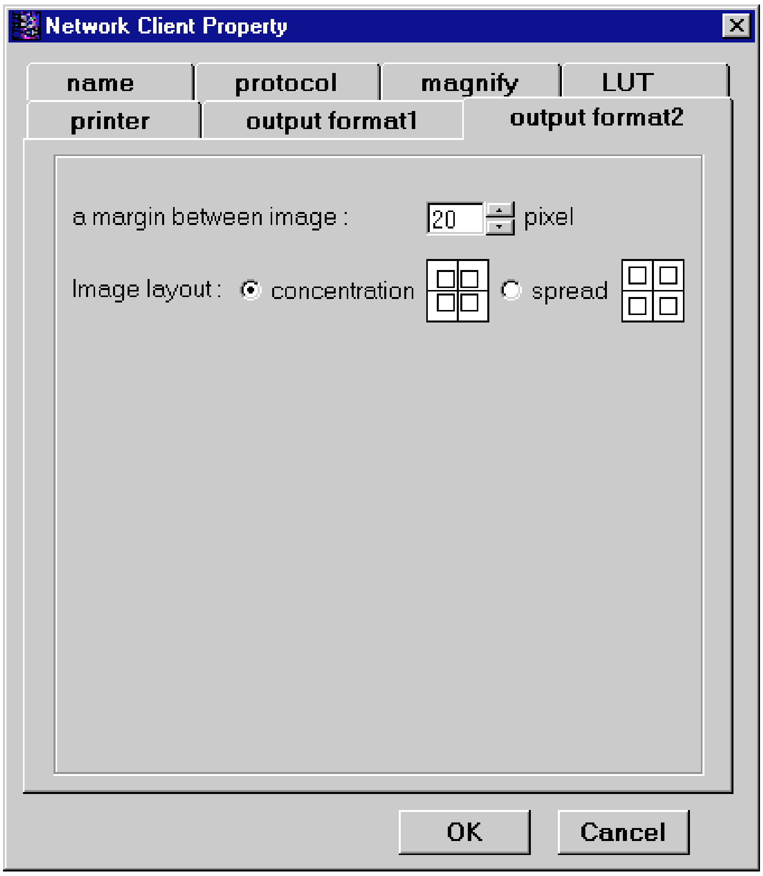
medium type(base color) : ● blue ○ clear

film orientation : ● PORTRAIT ○ LANDSCAPE

mirror : ○ ON(Mirror) ● OFF(Normal)

Overlay threshold density : 120

([output format2] for software ver. A05 or later)


Network Client Property
name
protocol
magnify
LUT
printer
output format1
output format2
OK
Cancel

a margin between image : 20 pixel

Image layout : ● concentration ○ spread

(16) Specify client-dependent default settings for the output format.

- [border density:]:
  Specify the border density in multiples of 100 × actual value (range = 0 to 300).
- [polarity (Pos./Neg.):]:
  Choose either [normal (Pos.)] (black/white reversal off) or [reverse (Neg.)] (black/white reversal on).
- [trim density:]:
  Specify the image trim density in multiples of 100 × actual value (range = 0 to 300).
- [trim:]:
  Choose either [ON] (with trim) or [OFF] (without trim).
- [trim width:]:
  Specify the width of the trim in pixels (range = 1 to 9).
- [number of copies:]:
  Specify the default number of print copies in the range of 1 to 99.
- [film size:]:
  Select the default print size from [14 × 17 (inch)] (3543), [14 × 14 (inch)] (3535), [11 × 14 (inch)] (2636), and [8 × 10 (inch)] (2025).

◆ NOTE ◆

[8 × 10 (inch)] (2025) size film is applicable only for DICOM clients with software ver. A05 or later. Also, output printer must support [8 × 10 (inch)] (2025) size film.

- [medium type (base color):]:
  Choose either [blue] or [clear] for the default film base.
- [film orientation:]:
  Choose either [PORTRAIT] or [LANDSCAPE] for the film orientation.
- [mirror:]:
  Choose either [ON (mirror)] (glossy side to front) or [OFF (Normal)] (glossy side to back).

- [Overlay threshold density:]:
  For overlay images, specify a threshold value for the extent that the density corresponding to overlay bit "1" data, in multiples of 100 × actual value (range = 0 to 300).
  As this differs depending on the type of client (modality) concerned, specify a value according to the post-connection report for the relevant model in the "Modality Connection List".
  Run a test image output to check that overlay images are displayed correctly at the new setting. If the character and scale in white appear to have sections missing, increase the set value. If the character and scale in black appear to have sections missing, decrease the set value.
  Change the set value by only 15 to 20 at a time while checking the output images until the optimum value is attained.

◆ NOTE ◆

For software ver. A05 or later, set [a margin between image:] and [Image layout:] shown below in [output format2].
For software ver. A04 or earlier, set them referring to "● Setting Margin Between Image Frames" and "● Setting Image Frame Layout" in "■ For DICOM and TOSHIBA Protocols" from "7.7 Entering Annotation Text [Annotation]".

- [a margin between image:] (supporting software ver. A05 or later):
  Enter a value for margin between images set on film in the field. (range: 0 to 50, unit: pixels, default value: 20)
  Normally, the default value for the margin between images frames should be used. Do not change the default setting unless requested by a user because of problems with the layout.

- [Image layout:] (supporting software ver. A05 or later):
  Sets how image frames are arranged.
  - [concentration]: Sets the image frames in the center of film (secures the setting value of [a margin between image:]). (default setting)
  - [spread]: Sets the image frames in the center within each of the remaining image blocks that are secured by the setting value of [a margin between image:].

◆ NOTE ◆

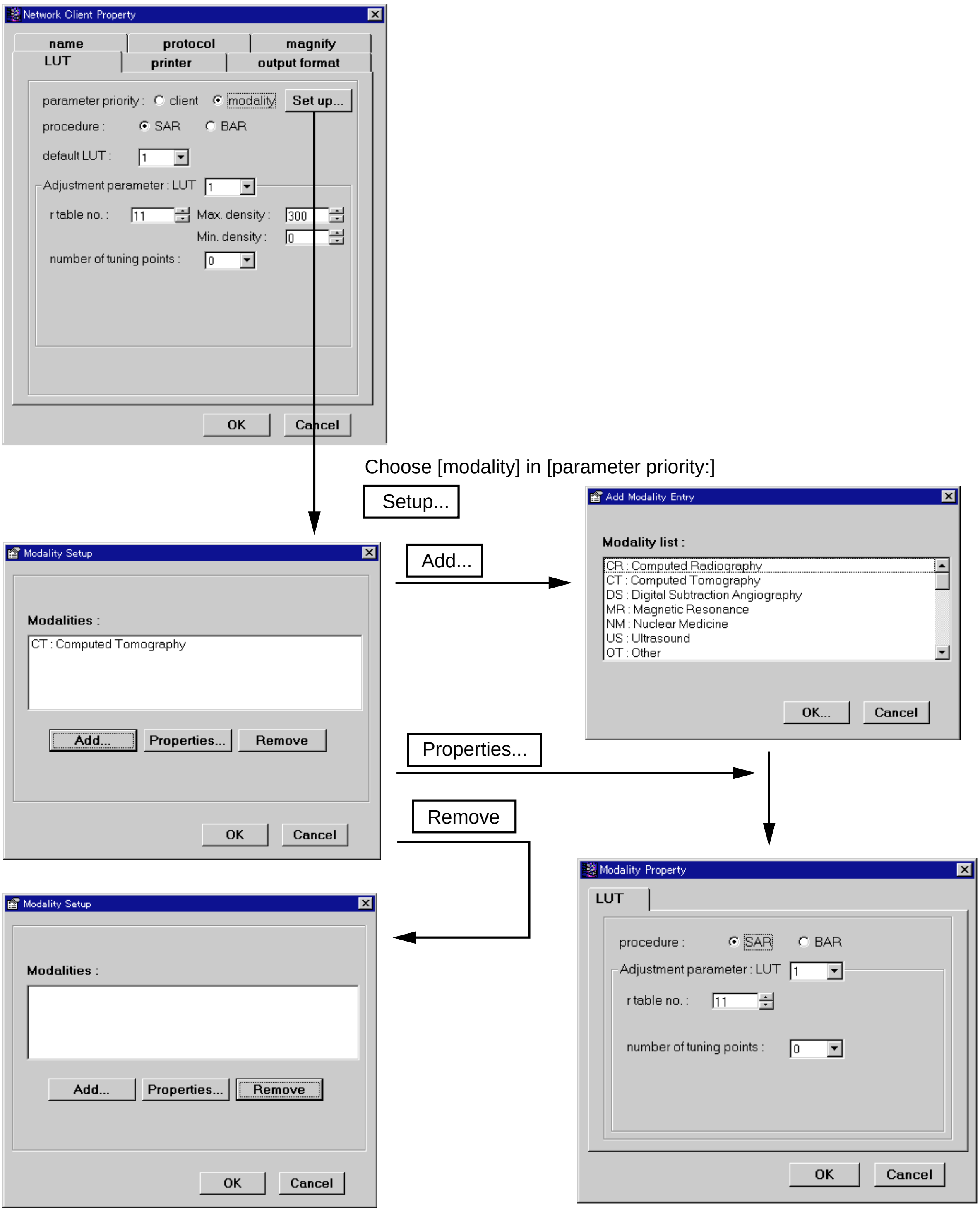
For [concentration], all image sizes arranged on a film should be the same. Image size varies in the following cases, so even if [concentration] is set, images are arranged by [spread].
- When images of different sizes are included on an one film.
- For DICOM protocol, when output image size on a film (width of image) is specified (Requested Image Size) in the image data sent from a client.

(17) After completing all settings, click [OK].
→ The [Clients] window on the [SERVICE UTILITY] window reappears.

7.6 Adding, Modifying, or Deleting a Modality Information [Modality Setup]

For the TOSHIBA protocol, from the [LUT] window during the client settings procedure ([Network Client Property]), choose [modality] in the [parameter priority:] (when data contains modality information, modality-dependent image processing parameters takes precedence). Then click [Setup...] to display the [Modality Setup] window.
The [Modality Setup] window can be used to add or change parameters by modality and delete registered modality information for the tone correction processing.

■ [Modality Setup] Menu Sequence


Network Client Property
name
protocol
magnify
LUT
printer
output format
Set up...
OK
Cancel
Modality Setup
Add...
Properties...
Remove
OK
Cancel
Add Modality Entry
OK...
Cancel
Modality Property
LUT
OK
Cancel

Network Client Property – LUT:
parameter priority : ○ client ● modality
procedure : ● SAR ○ BAR
default LUT : 1
Adjustment parameter : LUT 1
r table no. : 11
Max. density : 300
Min. density : 0
number of tuning points : 0

Choose [modality] in [parameter priority:]

Setup...

Modality Setup
Modalities :
CT : Computed Tomography

Add...

Add Modality Entry
Modality list :
CR : Computed Radiography
CT : Computed Tomography
DS : Digital Subtraction Angiography
MR : Magnetic Resonance
NM : Nuclear Medicine
US : Ultrasound
OT : Other

Properties...

Modality Property – LUT:
procedure : ● SAR ○ BAR
Adjustment parameter : LUT 1
r table no. : 11
number of tuning points : 0

Remove

Modality Setup
Modalities :

◆ NOTE ◆

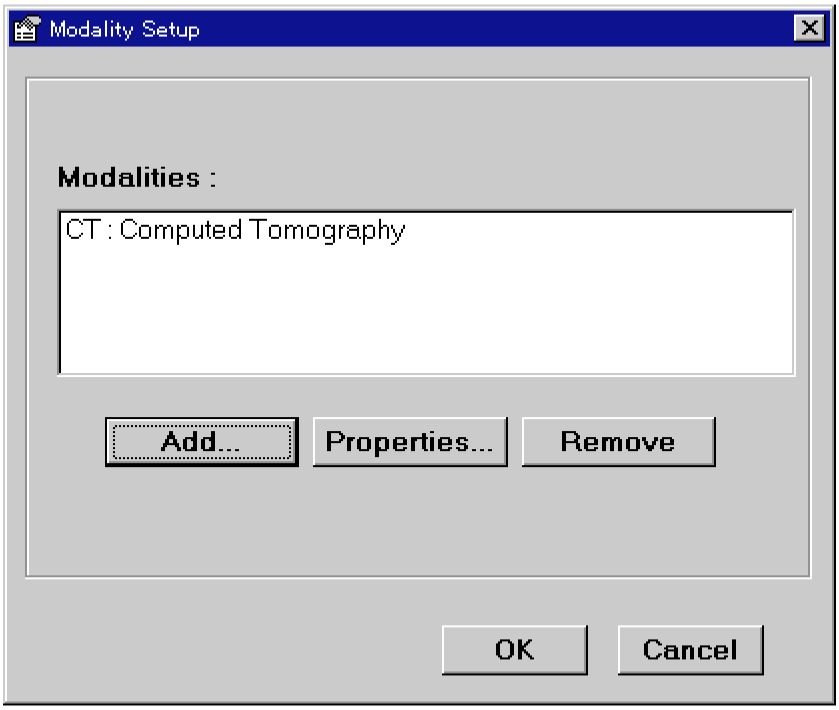
This parameter is available only when the following three conditions are met:

- Modality information is contained in the image-related information from clients.
- Modality-dependant tone correction processing parameters are given to the higher priority in the [parameter priority:].
- The appropriate modality information is registered.

■ Display of [Modality Setup] Window

(1) For the TOSHIBA protocol, from the [LUT] window, choose [modality] on the [parameter priority:], then click [Setup...].

→ The [Modality Setup] window appears.



CT : Computed Tomography

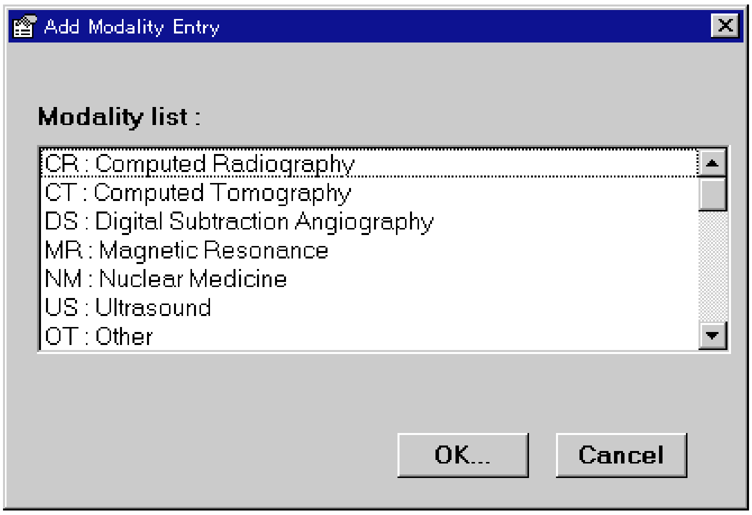
◆ NOTE ◆

[Modalities:] lists modalities for which modality-dependent tone correction processing parameters have been set. No modality is registered at installation.

- To Add Modality Information

(1) On the [Modality Setup] window, click [Add...].

→ The [Add Modality Entry] window appears.



CR : Computed Radiography
CT : Computed Tomography
DS : Digital Subtraction Angiography
MR : Magnetic Resonance
NM : Nuclear Medicine
US : Ultrasound
OT : Other

The [Modality list:] lists all eligible modalities.

(2) Select a modality to register from the [Modality list:], then click [OK...].

→ The [Modality Property] window appears (go to " ■ Using [Modality Property] Window").

- To View and/or Modify Modality Information Settings

(1) From the [Modalities:] list in the [Modality Setup] window, select a modality to view and/or modify, then click [Properties...].

→ The [Modality Property] window appears (go to " ■ Using [Modality Property] Window").

- To Delete Registered Modality Information

(1) From the [Modalities:] list in the [Modality Setup] window, select a modality to delete, then click [Remove].

→ The selected modality is deleted.

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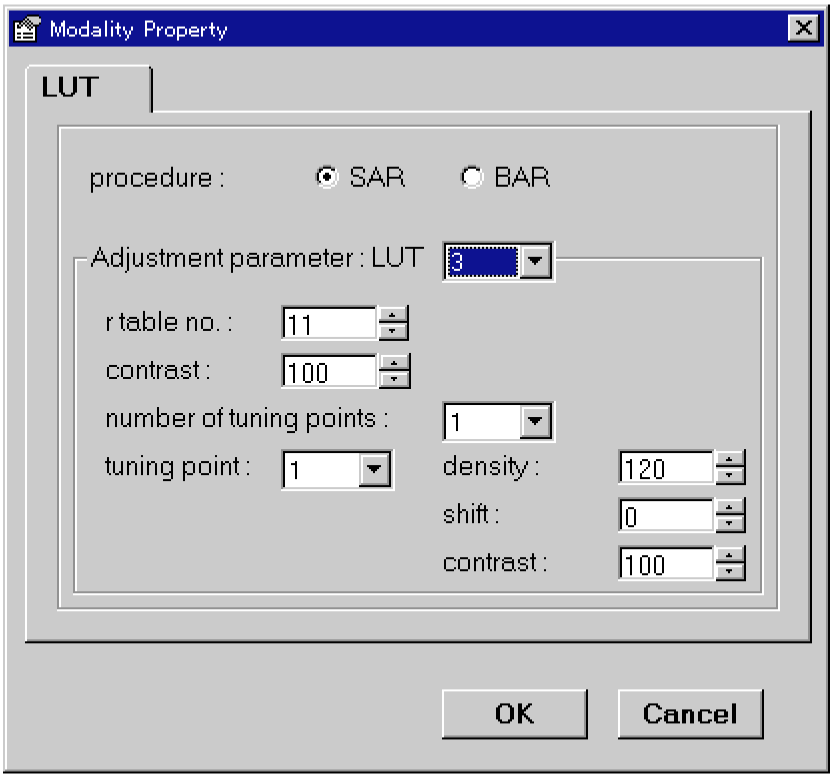
■ Using [Modality Property] Window

● [Modality Property] Window (Software Ver. A03 or earlier)

When [SAR] is selected



Modality Property

LUT

procedure : ● SAR ○ BAR

Adjustment parameter : LUT 3

r table no. : 11

contrast : 100

number of tuning points : 1

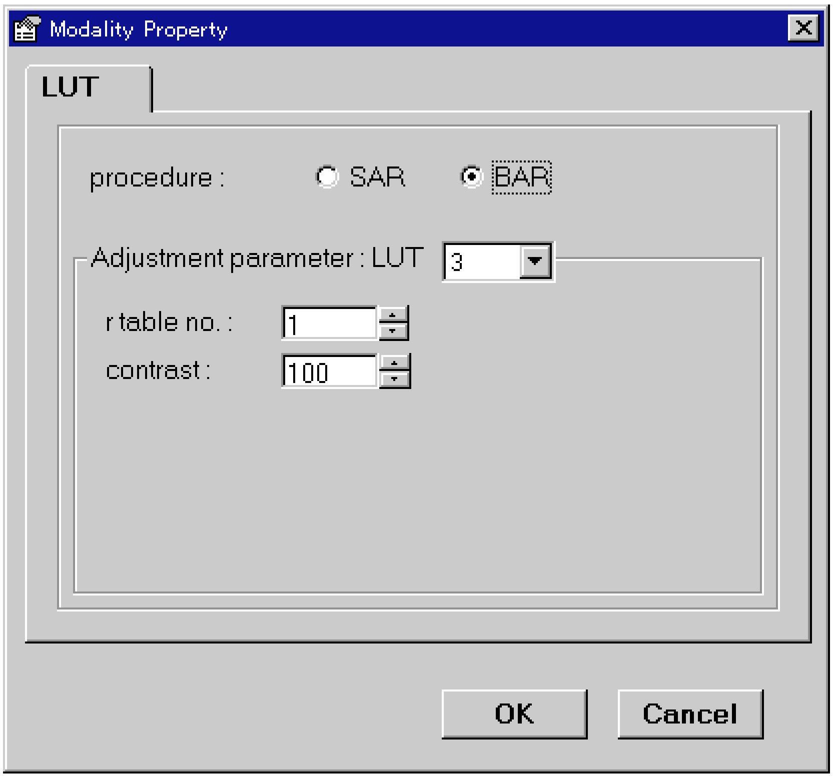
tuning point : 1

density : 120

shift : 0

contrast : 100

When [BAR] is selected



Modality Property

LUT

procedure : ○ SAR ● BAR

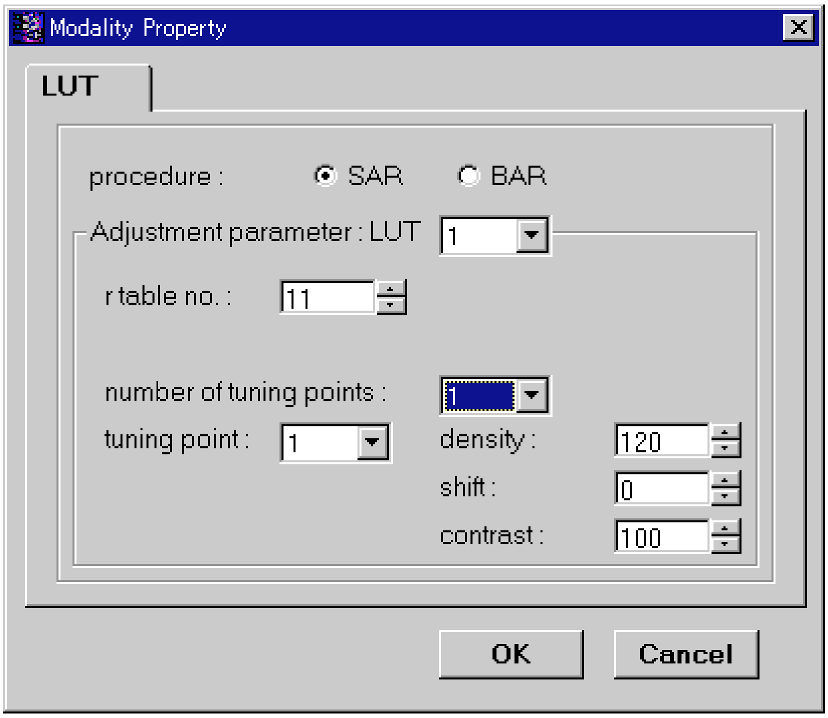
Adjustment parameter : LUT 3

r table no. : 1

contrast : 100

- [Modality Property] Window (Software ver. A04 or later)

When [SAR] is selected



procedure : ● SAR ○ BAR

Adjustment parameter : LUT 1

r table no. : 11

number of tuning points : 1

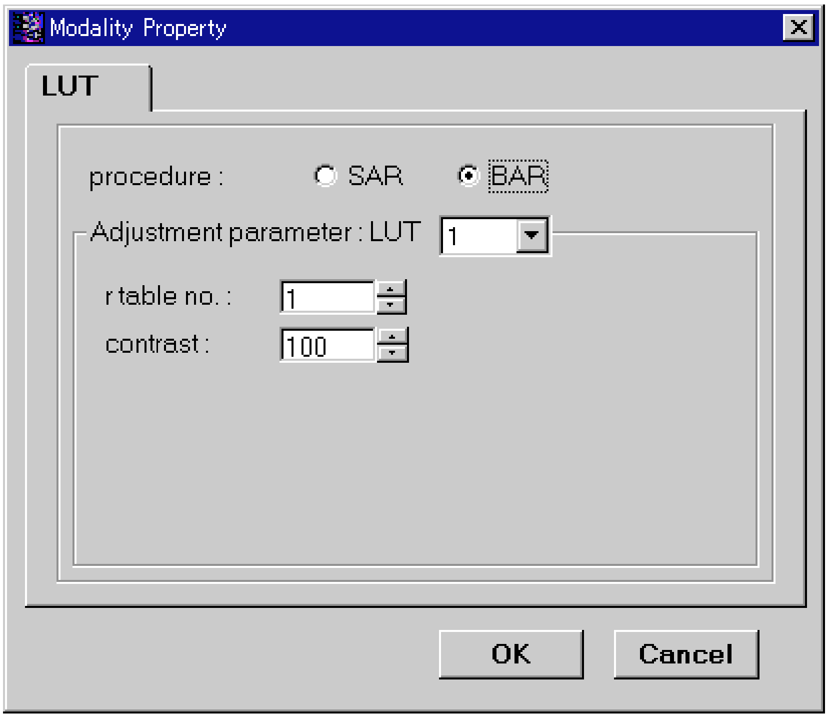
tuning point : 1

density : 120

shift : 0

contrast : 100

When [BAR] is selected



procedure : ○ SAR ● BAR

Adjustment parameter : LUT 1

r table no. : 1

contrast : 100

◆ NOTE ◆

Refer to “Chapter 2 Service Utility - Additional Instructions 1. Supplementary Explanation for Setting LUT Content” in the “FN-PS551 Service Manual-Appendix” for details (gamma table, etc.) on each of the parameters used by the following LUT settings.

(1) At [procedure], choose either [SAR] or [BAR] mode for the tone correction processing.

(2) Specify default settings for the following tone correction processing parameters.

- [Adjustment parameter: LUT]:
  Specify the following parameters for each LUT number (1 to 8).
  - [γ table no.:] : For SAR, range = 11 to 50.
    For BAR, range = 1 to 20.
  - [contrast:]: Specify the contrast in multiples of 100 × actual value (range = 10 to 400).
    Also, this contrast setting does not exist for SAR on software version A04 or later.

For the SAR method, the following settings are also required for tone correction curve tuning (if used).

- [number of tuning points:]:
  Specify the number of fine tuning points in the range of 0 to 5. The following values must be set for each tuning point when the number of tuning points is set to 1 or more.
  - [density:]: Specify the tuning density in multiples of 100 (range = 0 to 300).
    Follow the rule of minimum density<density<maximum density.
  - [shift:]: Specify the shift density in multiples of 100 (range = -100 to 100).
    Follow the rule of minimum density<density ± shift <maximum density.
  - [contrast:]: Specify the contrast at the tuning point in multiples of 100 (range = 10 to 400).

◆ NOTE ◆

The [Modality Property] window does not have maximum and minimum density settings for tone correction processing parameters. The maximum and minimum density values are taken from data specified by individual clients or from data in the [LUT] window durings the client setting procedure ([Network Client Property]).

(3) Check that all parameters are specified correctly, then click [OK].

→ The [Modality Setup] window reappears.

To add more modality information, repeat the procedure described in the previous section " ● To Add Modality Information".

(4) After adding, viewing, or modifying modality information, click [OK] on the [Modality Setup] window.

→ The [LUT] window on the [Network Client Property] reappears.

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7.7 Entering Annotation Text [Annotation]

Specify an annotation text to appear on output film and margin between image frames (for software ver. A05 or later, specify in “● [output format] Window” of “■ Using [Network Client Property] Window” from “7.5 Adding, Modifying, or Deleting a Client [Clients]”) for the DICOM and TOSHIBA protocols, and film output format related settings to for the IPU function (supporting software ver. A03 or later).

■ For DICOM and TOSHIBA Protocols

● Entering an Annotation Text

(1) From the [SERVICE UTILITY] window, click the [Annotation] tab.

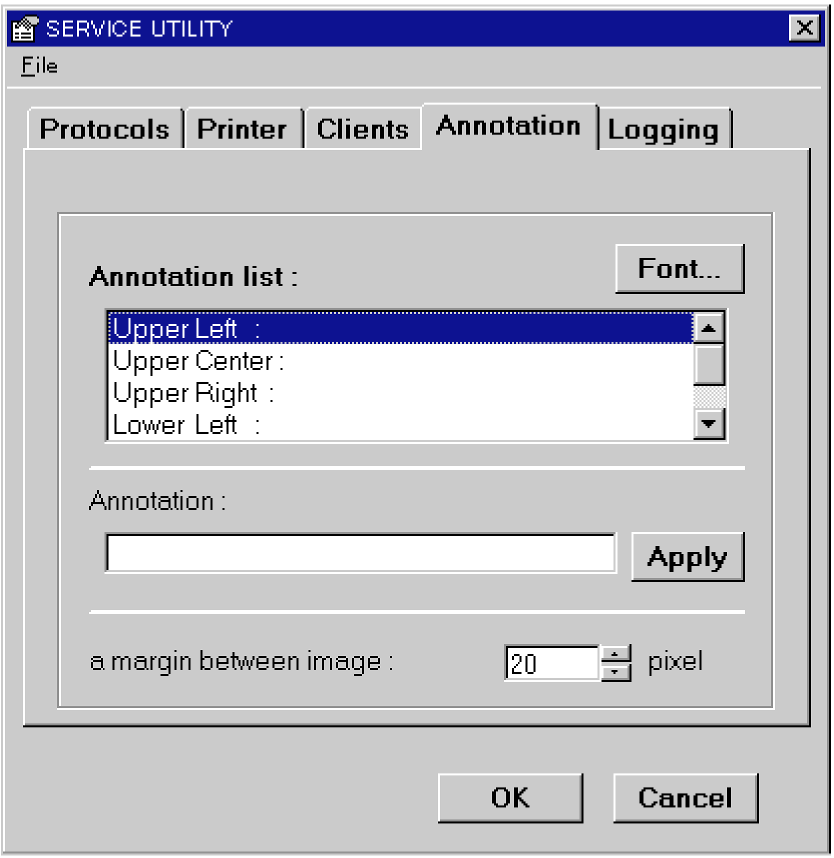
For software ver. A02 or later, the [Print Server] tab is shown on the [Annotation] window.

◆ NOTE ◆

For software ver. A02 or later, click the [Print Server] tab if the [Print Server] is not shown.

→ The [Annotation] window appears.

(Software ver. A00)

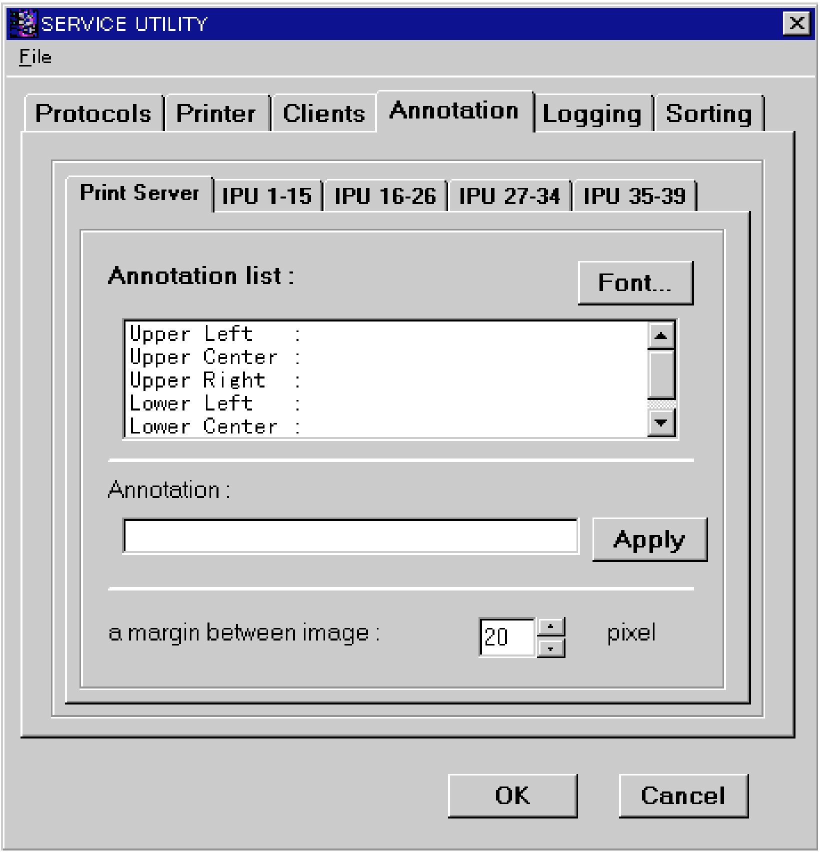


Annotation list :
Upper Left :
Upper Center :
Upper Right :
Lower Left :

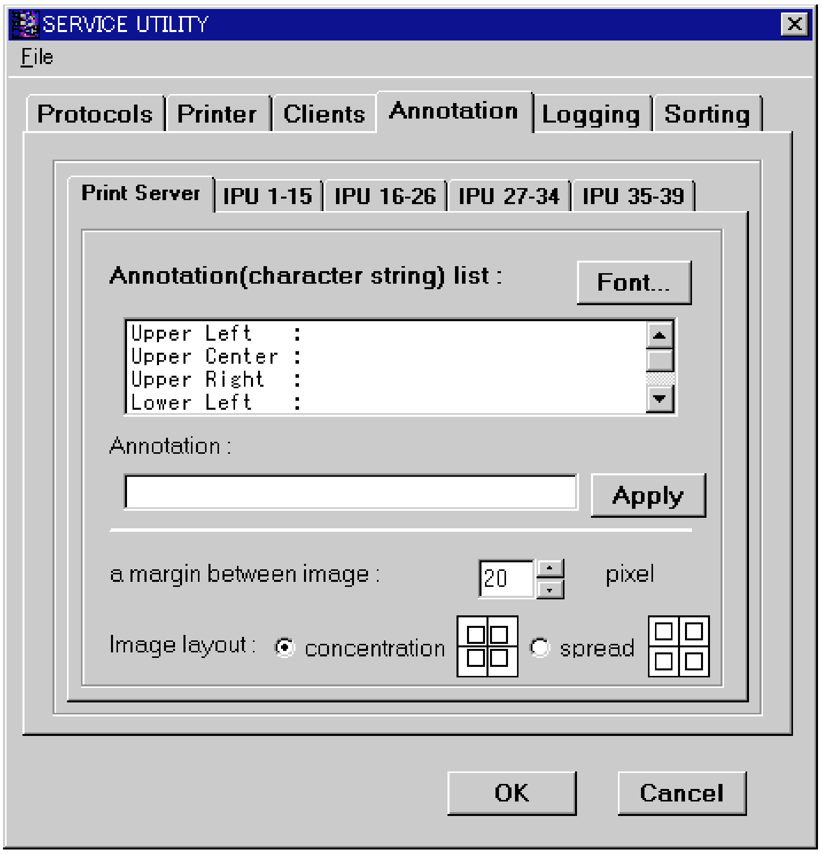
Annotation :

a margin between image : 20 pixel

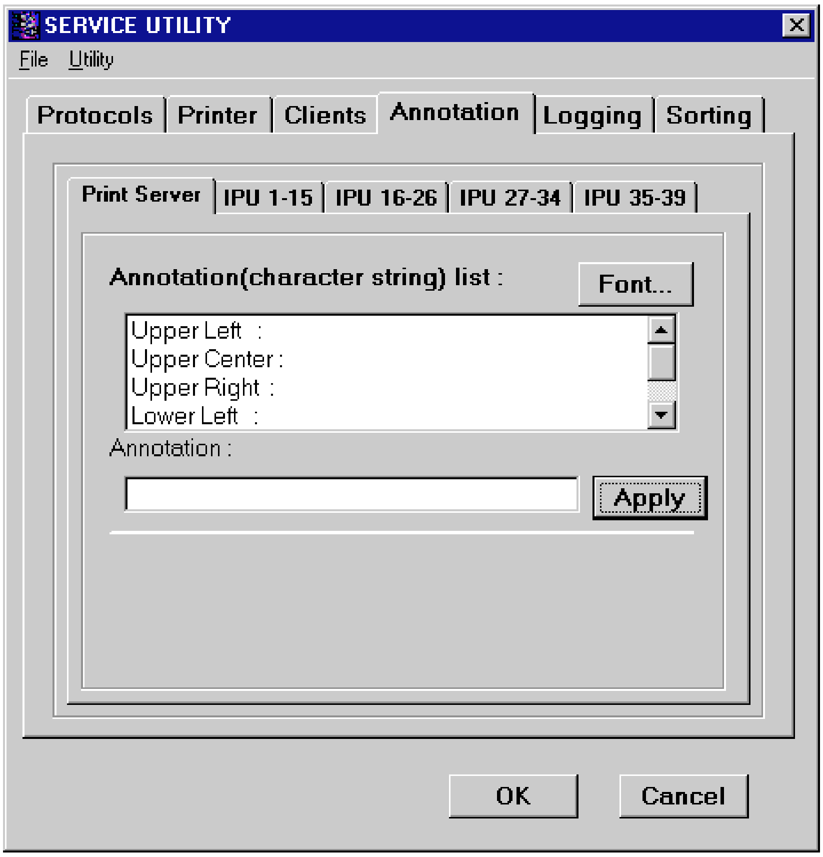
(Software ver. A02/A03)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Print Server
IPU 1-15
IPU 16-26
IPU 27-34
IPU 35-39
Annotation list :
Font...
Upper Left :
Upper Center :
Upper Right :
Lower Left :
Lower Center :
Annotation :
Apply
a margin between image :
20
pixel
OK
Cancel

(Software ver. A04)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Print Server
IPU 1-15
IPU 16-26
IPU 27-34
IPU 35-39
Annotation(character string) list :
Font...
Upper Left :
Upper Center :
Upper Right :
Lower Left :
Annotation :
Apply
a margin between image :
20
pixel
Image layout : ● concentration ○ spread
OK
Cancel

(Software ver. A05 or later)


SERVICE UTILITY
File Utility
Protocols
Printer
Clients
Annotation
Logging
Sorting
Print Server
IPU 1-15
IPU 16-26
IPU 27-34
IPU 35-39
Font...
Apply
OK
Cancel

Annotation(character string) list :

Upper Left :
Upper Center :
Upper Right :
Lower Left :

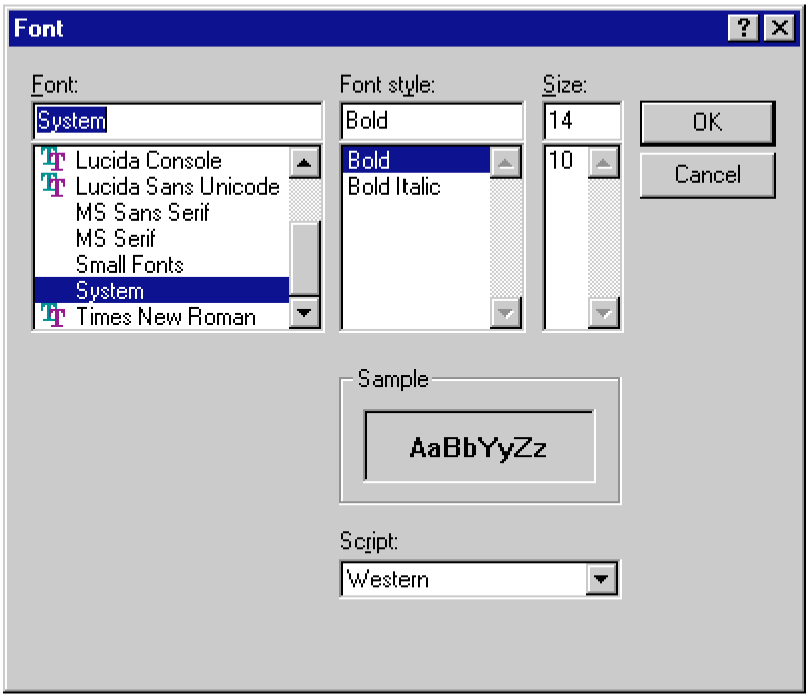
Annotation :

◆ NOTE ◆

- The [Annotation list:] lists annotation boxes where an annotation text can be entered, together with texts if entered. No annotation text is registered at installation.
- The annotation box title indicates a location where an annotation text will appear on the film. Different annotation messages can be entered in each location.
  - Upper Left: = upper left corner of the film
  - Upper Center: = top of film in the center
  - Upper Right: = upper right corner of the film
  - Lower Left: = lower left corner of the film
  - Lower Center: = bottom of film in the center
  - Lower Right: = lower right corner of the film
- The width/length of the annotation box depends on the film size and orientation (landscape or portrait), but the height of the annotation boxes is fixed. For this reason, larger fonts may cause characters to be cut off, while overly long messages will not be displayed in full. Check the film output to confirm that the specified annotation text is fully displayed as intended.

(2) To specify a font, click [Font...].

→ The [Font] window appears.



Font
Font:
System
Lucida Console
Lucida Sans Unicode
MS Sans Serif
MS Serif
Small Fonts
System
Times New Roman
Font style:
Bold
Bold
Bold Italic
Size:
14
10
OK
Cancel
Sample
AaBbYyZz
Script:
Western

(3) Specify a font type and size in the [Font] and [Size] on the [Font] window, and then click [OK].

◆ NOTE ◆

The [Font style] to output an annotation text is fixed at “Regular”.

→ The [Annotation] window reappears.

(4) On the [Annotation list:] list, click an annotation box desired.

(5) Enter a text in the [Annotation] text entry box.

◆ NOTE ◆

In addition to standard characters, the following macros are available.

%YYYY% : Year in which print request was received (four digits, 199x to 20xx)
%MM% : Month in which print request was received (two digits, 01 to 12)
%DD% : Day on which print request was received (two digits, 01 to 31)
%MON% : Abbreviation for month in which print request was received (JAN, FEB, etc.)
%TIME% : Time at which print request was received (00:00 to 23:59)

For example, to produce the following readout for hospital name, print request date and time information:
FUJIFILM <sp> HOSPITAL <sp> 1998.08.12 <sp> 18:30
Enter the following text:
`“FUJIFILM<sp>HOSPITAL<sp>%YYYY%.%MM%.%DD%<sp>%TIME%”`
(Note: <sp> designates a space.)

(6) Check that parameters are specified correctly, click [Apply].

→ The text entered in the [Annotation list:] box is displayed.

◆ NOTE ◆

To enter an annotation text in other annotation boxes, repeat the procedure from step (4) onwards.

◆ NOTE ◆

For software ver. A05 or later, "● Setting Margin between Image Frames" and "● Setting Image Frames Layout" are set for each client separately. When using software ver. A05 or later, refer to "● [output format] Window" of "■ Using [Network Client Property] Window" from "7.5 Adding, Modifying, or Deleting a Client [Clients]".

● Setting Margin between Image Frames (supporting software ver. A00 to A04)

(1) Specify a value in pixels in [a margin between image:] in the range of 0 to 50 (default is 20).

Normally, the default value for the margin between image frames should be used. Do not change the default setting unless requested by a user because of problems with the layout.

● Setting Image Frames Layout (supporting software ver. A04)

(1) [Image layout:] Sets how image frames are arranged.

• [concentration]:	Sets the image frames in the center of film (secures the setting value of [a margin between image:]). (default setting)
• [spread]:	Sets the image frames in the center within each of the remaining image blocks that are secured by the setting value of [a margin between image:].

◆ NOTE ◆

For [concentration], all image sizes arranged on a film should be the same. Image size varies in the following cases, so even if [concentration] is set, images are arranged by [spread].

- When images of different sizes are included on an one film.
- For DICOM protocol, when output image size on a film (width of image) is specified (Requested Image Size) in the image data sent from a client.

■ For IPU Function

◆ NOTE ◆

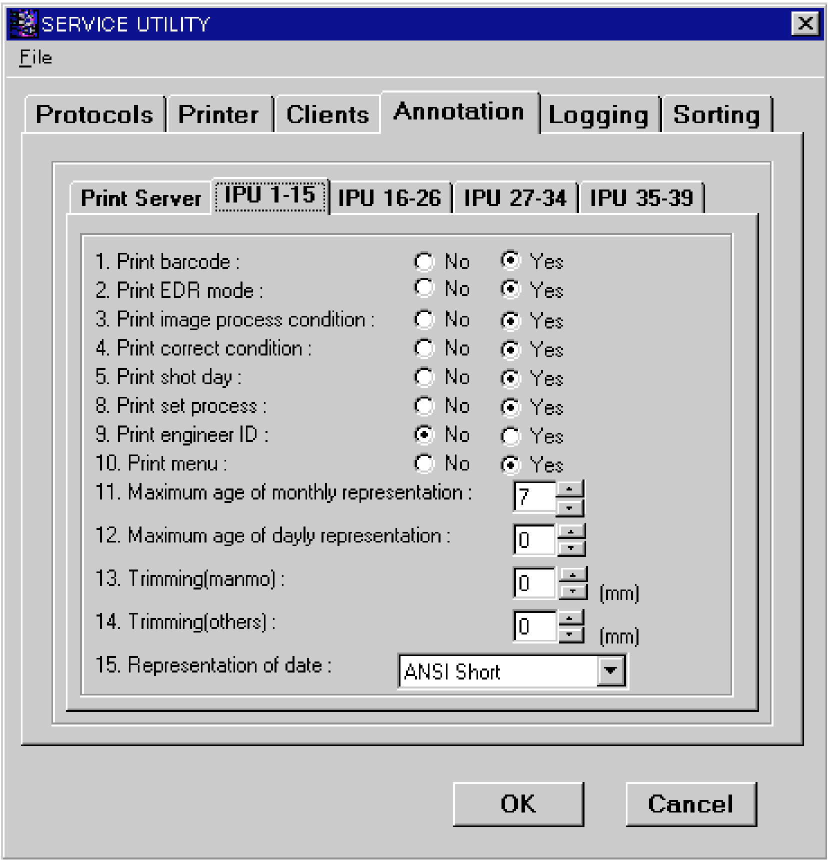
- This setting window is available with software ver. A03 or later although it appears even with software ver. A02 or later.
- The following parameters on the [IPU 1-15], [IPU 16-26], [IPU 27-34] and [IPU 35-39] windows are identical to those on the “CONFIGURATION SETTING - PRINT” settings of the MAINTENANCE UTILITY in the FCR 5000 series. However, three parameters (6. HN, 7. HP, and 16. AB) of them are internally processed according to data sent to the FN-PS551. For this reason, these three parameters are not shown in the service utility of the FN-PS551.
- Refer to “Chapter 2 Service Utility - Additional Instructions 2.1 Overview and Supplementary Explanation for Display of Film Character Area” in the “FN-PS551 Service Manual-Appendix” for details of the settings of IPU23 and IPU26 to 36.

Choose the [IPU 1-15], [IPU 16-26], [IPU 27-34], and [IPU 35-39] tabs in sequence to specify settings related to film output formats for the IPU function.

● For [IPU 1-15]

(1) From the [Annotation] window, click the [IPU 1-15] tab.

→ The [IPU 1-15] window appears.



1. Print barcode : ○ No ● Yes
2. Print EDR mode : ○ No ● Yes
3. Print image process condition : ○ No ● Yes
4. Print correct condition : ○ No ● Yes
5. Print shot day : ○ No ● Yes
8. Print set process : ○ No ● Yes
9. Print engineer ID : ● No ○ Yes
10. Print menu : ○ No ● Yes
11. Maximum age of monthly representation : 7
12. Maximum age of dayly representation : 0
13. Trimming(manmo) : 0 (mm)
14. Trimming(others) : 0 (mm)
15. Representation of date : ANSI Short

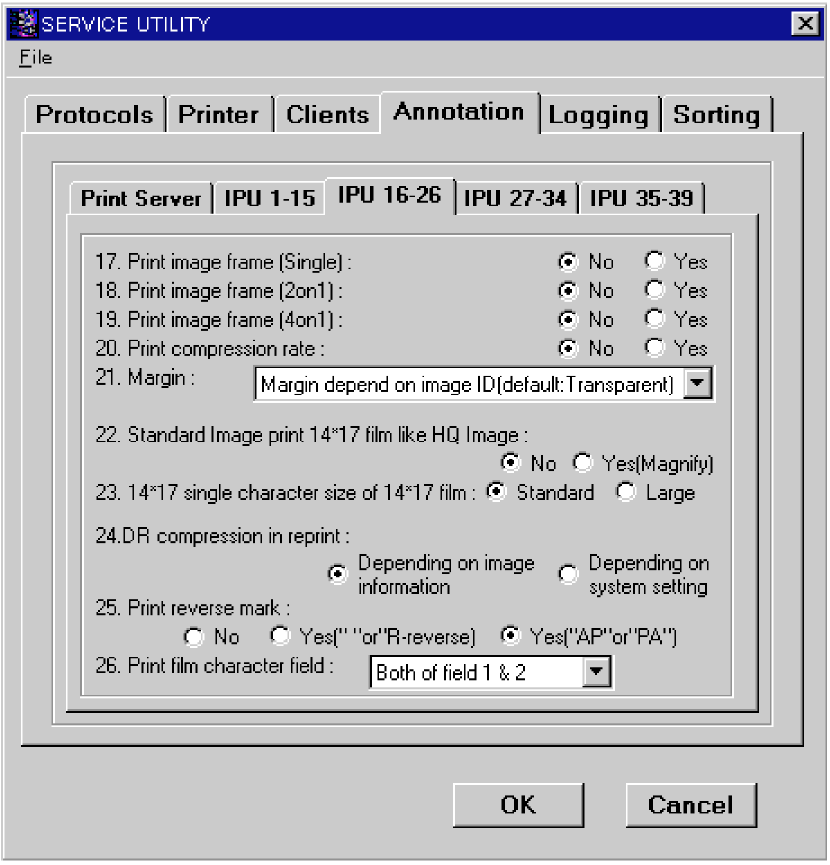
(2) Specify the following parameters.

- [1. Print barcode:]:
  Choose [Yes] (default) to print IP barcode information. Choose [No] not to print it.
- [2. Print EDR mode:]:
  Choose [Yes] (default) to print EDR mode information. Choose [No] not to print it.
- [3. Print image process condition:]:
  Choose [Yes] (default) to print image process conditions. Choose [No] not to print them.
- [4. Print correct condition:]:
  Choose [Yes] (default) to print correct conditions. Choose [No] not to print them.
- [5. Print shot day:]:
  Choose [Yes] (default) to print an exposure date. Choose [No] not to print it.
- [8. Print set process:]:
  Choose [Yes] (default) to print set processing information. Choose [No] not to print it.
- [9. Print engineer ID:]:
  Not currently available. Set to default value of [No] (Not to print it).
- [10. Print Menu:]:
  Choose [Yes] (default) to print a menu letters. Choose [No] not to print it.
- [11. Maximum age of monthly representation:]:
  Enter the upper-limit age in years for age display in months in this box in the range of 0 to 99 (the default value is 7).
- [12. Maximum age of daily representation:]:
  Enter the upper-limit age in months for age display in days in this box in the range of 0 to 12 (the default value is 0).
- [13. Trimming (mammo):]:
  Enter the amount of trimming (mammo type IP) in millimeters in this box in the range of 0 to 25 (the default value is 0).
- [14. Trimming (others):]:
  Enter the amount of trimming (other than mammo type IP) in millimeters in this box in the range of 0 to 25 (the default value is 0).
- [15. Representation of date:]:
  Select the format of representation of date from the drop-down list.
  Information in the parentheses below are example displays of each.

“Japanese”	(H10. 04. 01)
“ANSI Long”	(1998. APR. 01)
“ANSI Short”	(1998. 04. 01, Default)
“American Long”	(APR. 01. 1998)
“American Short”	(04. 01. 1998)
“European Long”	(01. APR. 1998)
“European Short”	(01. 04. 1998)

- For [IPU 16-26]

(1) From the [Annotation] window, click the [IPU 16-26] tab.
→ The [IPU 16-26] window appears.



17. Print image frame (Single) : ● No ○ Yes
18. Print image frame (2on1) : ● No ○ Yes
19. Print image frame (4on1) : ● No ○ Yes
20. Print compression rate : ● No ○ Yes
21. Margin : Margin depend on image ID(default:Transparent)
22. Standard Image print 14*17 film like HQ Image : ● No ○ Yes(Magnify)
23. 14*17 single character size of 14*17 film : ● Standard ○ Large
24.DR compression in reprint : ● Depending on image information ○ Depending on system setting
25. Print reverse mark : ○ No ○ Yes(" "or"R-reverse) ● Yes("AP"or"PA")
26. Print film character field : Both of field 1 & 2

(2) Specify the following parameters.

- [17. Print image frame (Single):]:
  Choose [No] (default) not to print the image frame of a single 14″×17″, 14″×14″ and 18 × 43 cm image output on a 14″×17″ film (3543). Choose [Yes] to print it.
- [18. Print image frame (2in1):]:
  Choose [No] (default) not to print the image frame of two 18 × 43 cm images output on a 14″×17″ film (3543). Choose [Yes] to print it.
- [19. Print image frame (4in1):]:
  Choose [No] (default) not to print the image frame of four 14″×17″, 18 × 43 cm and 8″×10″ images output on a 14″×17″ film (3543). Choose [Yes] to print it.
- [20. Print compression rate:]:
  Choose [No] (default) not to print an image compression rate condition in reprint. Choose [Yes] to print it.

- [21. Margin:]:
  Select an option desired from the drop-down list to display the margin (outer margin of image trim) in black or transparent.

  "Margin depend on image ID (default: Transparent)": Displays a margin in black or transparent according to image information. If image information contains no specification for the margin, transparent margin (default) is selected.
  "Margin depend on image ID (default: Black)": Displays a margin in black or transparent according to image information. If image information contains no specification for the margin, black margin (default) is selected.
  "Transparent Margin (Fix)": Transparent margin is constantly selected.
  "Black Margin (Fix)": Black margin is constantly selected.
- [22. Standard Image print 14*17 film like HQ Image:]:
  Choose [No] (default) not to enlarge an image to a 14″×17″ film size (3543) for outputting it. Choose [Yes (Magnify)] to enlarge it.

CAUTION

It is necessary to obtain the permission of the Service headquarters before changing the setting for [22. Standard Image print 14*17 film like HQ Image:].

- [23. 14*17 single character size of 14*17 film:]:
  Choose [Standard] (default) to output a 14″×17″ image in an equal scaling on a 14″×17″ film (3543) with the standard size film character area 0 or 1. Choose [Large] to output a 14″×17″ image in an equal scaling on a 14″×17″ film (3543) with the large size film character area 0 or 1.

- [24. DR compression in print:]:
  Choose [Depending on image information] (default) to perform Dynamic range compression in reprint according to image information. Choose [Depending on system setting] to perform Dynamic range compression in reprint according to system setting.

CAUTION

For [24. DR compression in print:], the default value must be used as [Depending on system setting] option is disabled (not currently available).

- [25. Print reverse mark:]:
  Choose either option for indicating the reverse marks are reversed horizontally .

  [No]: The mark is not displayed.
  [Yes (" " or "R-reverse")]: The letter "R" is reversed horizontally if done.
  [Yes ("AP" or "PA")]: The letter "AP" or "PA" is indicated according to a camera or exposure method used (default).

- [26. Print film character field:]:
  Choose either option to specify the display method of film character area 0 and area1 that is used to output image with the film character area overlapping the image area on a 14″×17″ film (3543).
  "Both of field 1 & 2": Displays both of area 0 and area 1 (default).
  "Only field 1": Displays only area 0.
  "Only field 2": Displays only area 1.
  "None": Displays neither of area 0 nor area 1.

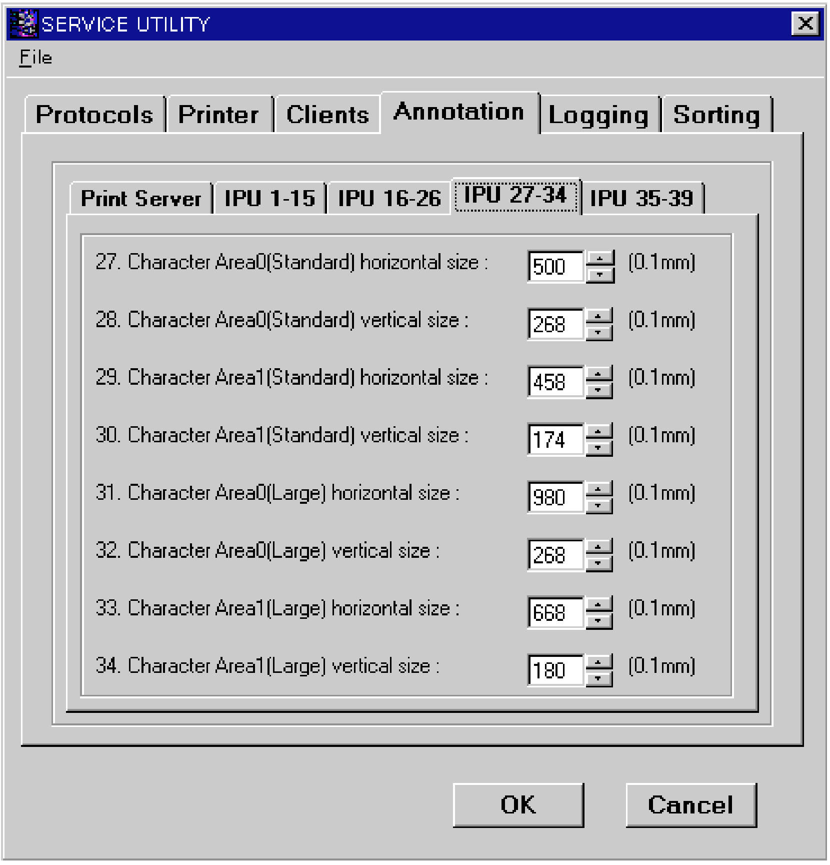
◆ NOTE ◆

The "field 1" and "field 2" in the [26. Print film character field:] drop-down list indicates the area 0 and area 1 respectively. The size, position, and rotation is specified on the IPU 27 to 36 described later.

- For [IPU 27-34]

(1) From the [Annotation] window, click the [IPU 27-34] tab.

→ The [IPU 27-34] window appears.


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
Print Server
IPU 1-15
IPU 16-26
IPU 27-34
IPU 35-39
OK
Cancel

27. Character Area0(Standard) horizontal size : 500 (0.1mm)
28. Character Area0(Standard) vertical size : 268 (0.1mm)
29. Character Area1(Standard) horizontal size : 458 (0.1mm)
30. Character Area1(Standard) vertical size : 174 (0.1mm)
31. Character Area0(Large) horizontal size : 980 (0.1mm)
32. Character Area0(Large) vertical size : 268 (0.1mm)
33. Character Area1(Large) horizontal size : 668 (0.1mm)
34. Character Area1(Large) vertical size : 180 (0.1mm)

(2) Specify the following parameters.

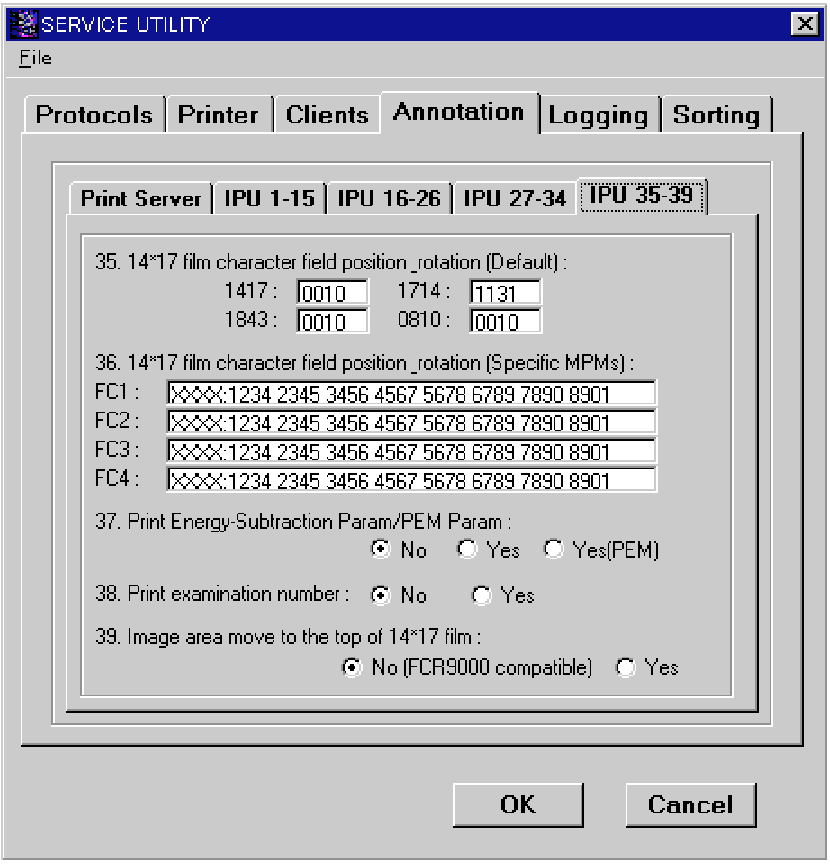
- [27. Character Area0 (Standard) horizontal size:]:
  Enter a horizontal size of the standard sized area 0 in this box in the range of 2 to 500/0.1mm (the default value is 500).
- [28. Character Area0 (Standard) vertical size:]:
  Enter a vertical size of the standard sized area 0 in this box in the range of 2 to 268/0.1 mm (the default value is 268).
- [29. Character Area1 (Standard) horizontal size:]:
  Enter a horizontal size of the standard sized area 1 in this box in the range of 2 to 458/0.1 mm (the default value is 458).
- [30. Character Area1 (Standard) vertical size:]:
  Enter a vertical size of the standard sized area 1 in this box in the range of 2 to 174/0.1 mm (the default value is 174).
- [31. Character Area0 (Large) horizontal size:]:
  Enter a horizontal size of the large sized area 0 in this box in the range of 2 to 980/0.1 mm (the default value is 980).
- [32. Character Area0 (large) vertical size:]:
  Enter a vertical size of the large sized area 0 in this box in the range of 2 to 268/0.1 mm (the default value is 268).
- [33. Character Area1 (Large) horizontal size:]:
  Enter a horizontal size of the large sized area 1 in this box in the range of 2 to 668/0.1 mm (the default value is 668).
- [34. Character Area1 (Large) vertical size:]:
  Enter a vertical size of the large sized area 1 in this box in the range of 2 to 180/0.1 mm (the default value is 180).

◆ NOTE ◆

The above window is used to specify a size of area 0 and area 1 that is used to output image with the film character area overlapping the image area on a 14″×17″ film (3543). It is noted that the large size is selectable from the [23. 14*17 single character size of 14*17 film] only when 14″×17″ sized image is output in an equal scaling. For other image output, the standard size is used.

- For [IPU 35-39]

(1) From the [Annotation] window, click the [IPU 35-39] tab.
→ The [IPU 35-39] window appears.



35. 14*17 film character field position _rotation (Default) :
1417 : 0010 1714 : 1131
1843 : 0010 0810 : 0010

36. 14*17 film character field position _rotation (Specific MPMs) :
FC1 : XXXX:1234 2345 3456 4567 5678 6789 7890 8901
FC2 : XXXX:1234 2345 3456 4567 5678 6789 7890 8901
FC3 : XXXX:1234 2345 3456 4567 5678 6789 7890 8901
FC4 : XXXX:1234 2345 3456 4567 5678 6789 7890 8901

37. Print Energy-Subtraction Param/PEM Param :
● No ○ Yes ○ Yes(PEM)

38. Print examination number : ● No ○ Yes

39. Image area move to the top of 14*17 film :
● No (FCR9000 compatible) ○ Yes

(2) Specify the following parameters.

- [35. 14*17 film character field position & rotation (Default):]:
  Enter appropriate numeric values in the following boxes to set positions and rotation of film character area 0 and 1.
  [1417:]: Specify the positions and rotation of area 0 and 1 on a 14″×17″ image in four digits. The default value 0010 means that the positions of area 0 and 1 are the top left-hand corner/not rotated and the top right-hand corner/not rotated respectively.
  [1714:]: Specify the positions and rotation of area 0 and 1 on a 14″×17″ image (Landscape) in four digits. The default value 1131 means that the positions of area 0 and 1 are the top right-hand corner/rotated and the bottom right-hand corner/rotated respectively.
  [1843:]: Specify the positions and rotation of area 0 and 1 on a 18 × 43 cm image in four digits. The default value 0010 means that the positions of area 0 and 1 are the top left-hand corner/not rotated and the top right-hand corner/not rotated respectively.
  [0810:]: Specify the positions and rotation of area 0 and 1 on a 8″×10″ image in four digits. The default value 0010 means that the positions of area 0 and 1 are the top left-hand corner/not rotated and the top right-hand corner/not rotated respectively.

The position/rotation definition of area 0 and 1 is as follows:

0031

90 deg. rotation of area 1 (0: Not rotated, 1: Rotated)

Position of area 1
(0: Top left-hand corner, 1: Top right-hand corner,
2: Bottom left-hand corner, 3: Bottom right-hand corner)

90 deg. rotation of area 0 (0: Not rotated, 1: Rotated)

Position of area 0
(0: Top left-hand corner, 1: Top right-hand corner,
2: Bottom left-hand corner, 3: Bottom right-hand corner)

FP4F0212.EPS

- [36. 14*17 film character fields position & rotation(Specific MPMs):]:
  To specify the positions and rotation of film character area 0 and 1 using specific MPM codes (for 4 types), enter positions and rotation of film character area 0 and 1and associated MPM codes (up to 8) in each of [FC1], [FC2], [FC3] and [FC4] (the default value for each box is XXXX:1234 2345 3456 4567 5678 6789 7890 8901).
  For film character areas associated with MPM codes that are not specified in the [FC1] to [FC4], they are output in the normal format (top left-hand corner/ no rotation for area 0, top right-hand corner/no rotation for area 1).

◆ REFERENCE ◆

The symbol “?” (wildcard) is available for a single MPM code that can be specified in the [FC1] to [FC4]. The “?” represents all characters from 0 to F. An example of setting: “123?” represents MPM codes from 1230 to 123F.

- [37. Print Energy-Subtraction Param./PEM Param.:]:
  Choose either option for printing Ene-Sub parameter/PEM parameter.
  [No]: Prints no parameter (default).
  [Yes]: Prints Ene-Sub parameter.
  [Yes (PEM)]: Software version A04 or later, prints PEM (Pattern enhancement processing for mammography) parameter. Cannot be selected in A03 or earlier software because this is not supported in that version.
- [38. Print examination number:]:
  Choose [No] (default) not to print an examination number in the ID card. Choose [Yes] to print it.

CAUTION

It is necessary to obtain the permission of the Service headquarters before changing the setting for [38. Print examination number:].

- [39. Image area move to the top of 14*17 film:]:
  Choose [No (FCR9000 compatible)] (default) not to move 14″×14″, 15 × 30 cm (pantomo) and 43 × 43 cm image areas to the upper part of 14″×17″ film (3543) for outputting them on it. Choose [Yes] to move them for outputting.

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7.8 Specifying the Acquisition of Log Data [Logging]

Specify the method of acquisition of log data, file storage of image data, and input/output processing priority.

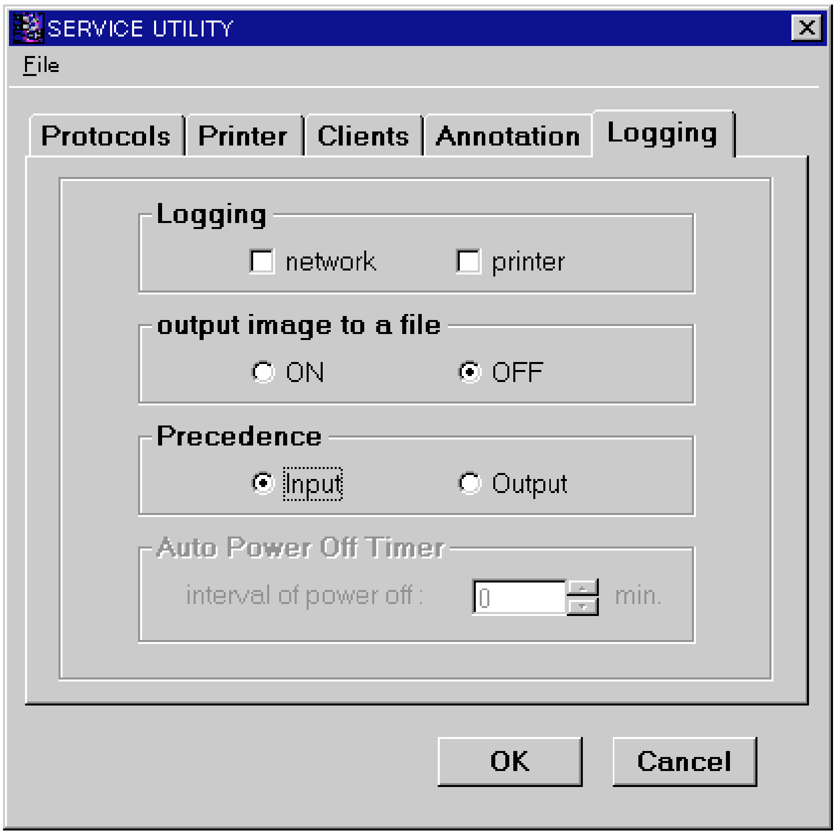
CAUTION

Never use [Logging] settings in the [SERVICE UTILITY] window at installation and normal service because they are used to analyze the design and configuration of the FN-PS551 application. Only if a request is made by the Service headquarters to use the settings, make a use of them according to their instructions.

(1) From the [SERVICE UTILITY] window, click the [Logging] tab.

→ The [Logging] window appears.

(Software ver. A00)



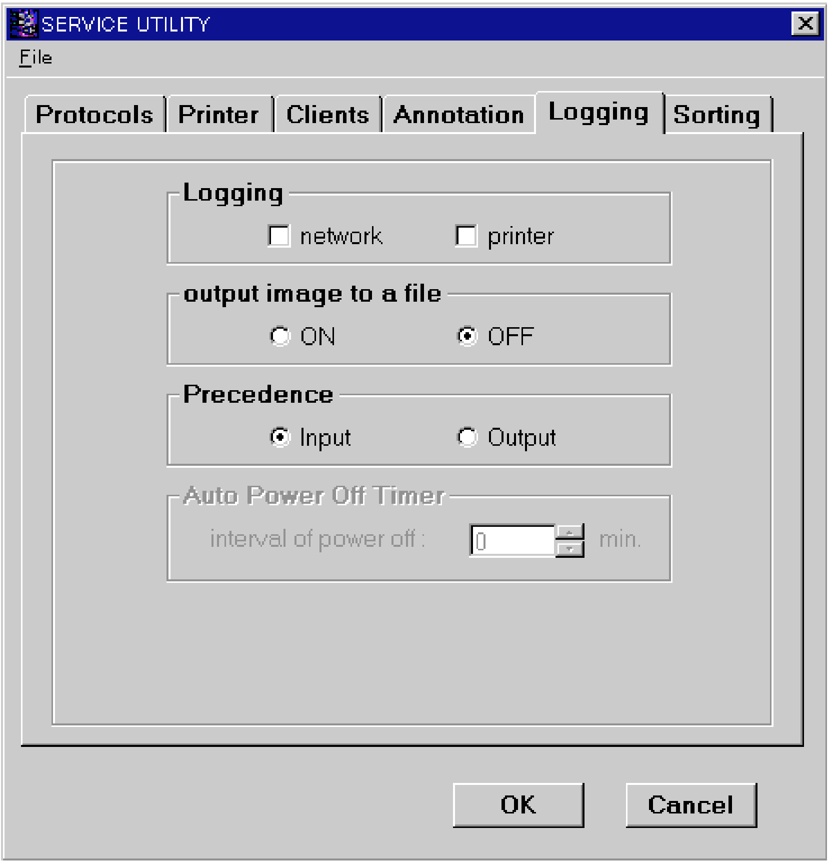
Logging
☐ network ☐ printer

output image to a file
○ ON ● OFF

Precedence
● Input ○ Output

Auto Power Off Timer
interval of power off : 0 min.

(Software ver. A02/A03)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
OK
Cancel

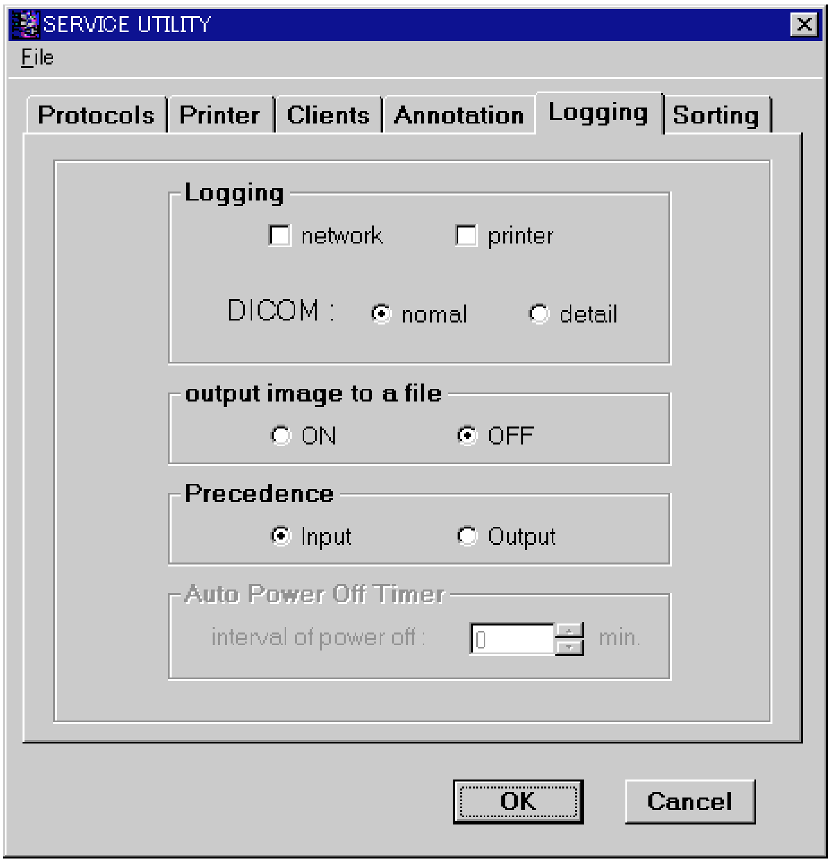
Logging
☐ network ☐ printer

output image to a file
○ ON ● OFF

Precedence
● Input ○ Output

Auto Power Off Timer
interval of power off : 0 min.

(Software ver. A04 or later)


SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
OK
Cancel

Logging
☐ network ☐ printer
DICOM : ● nomal ○ detail

output image to a file
○ ON ● OFF

Precedence
● Input ○ Output

Auto Power Off Timer
interval of power off : 0 min.

(2) Set the following parameters.

- [Logging]:

  Keeps a log of records of communication between FN-PS551 and devices connected to it. The default value is both off (i.e., logging off).

• [network]:	Records communication between FN-PS551 and network devices.
• [printer]:	Records communication between FN-PS551 and printers.

  Communication record level settings with the DICOM protocol client can be set on software version A04 or later.

• [normal]:	Normal log information (default setting)
• [detail]:	Detailed log information

  Also, system operation slows down slightly when logging is on.

◆ NOTE ◆

When using “7.11 Analysis Information Collection” function for software ver. A05 or later, it is necessary to specify prior acquisition of this setting as log information and then print out from each client.

Even if “7.11 Analysis Information Collection” is carried out if acquisition of log information is not specified, log file necessary for analysis is not collected.

- [output image to a file]:

  Stores processed image data as a file to enable on-screen viewing.

• [ON]:	Stores data in a file (data is not output to printer).
• [OFF]:	Stores not data in a file (data is output to printer).

  The default setting is [OFF]. Note that changing this setting to [ON] inhibits normal printer output.

- [Precedence]:

  Specifies whether to give a priority to input or output processing.

• [Input]:	Input processing takes priority (default).
• [Output]:	Output processing takes priority.

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7.9 Setting Sorting Conditions [Sorting]

Specify sorting conditions when a printer is equipped with a sorter.

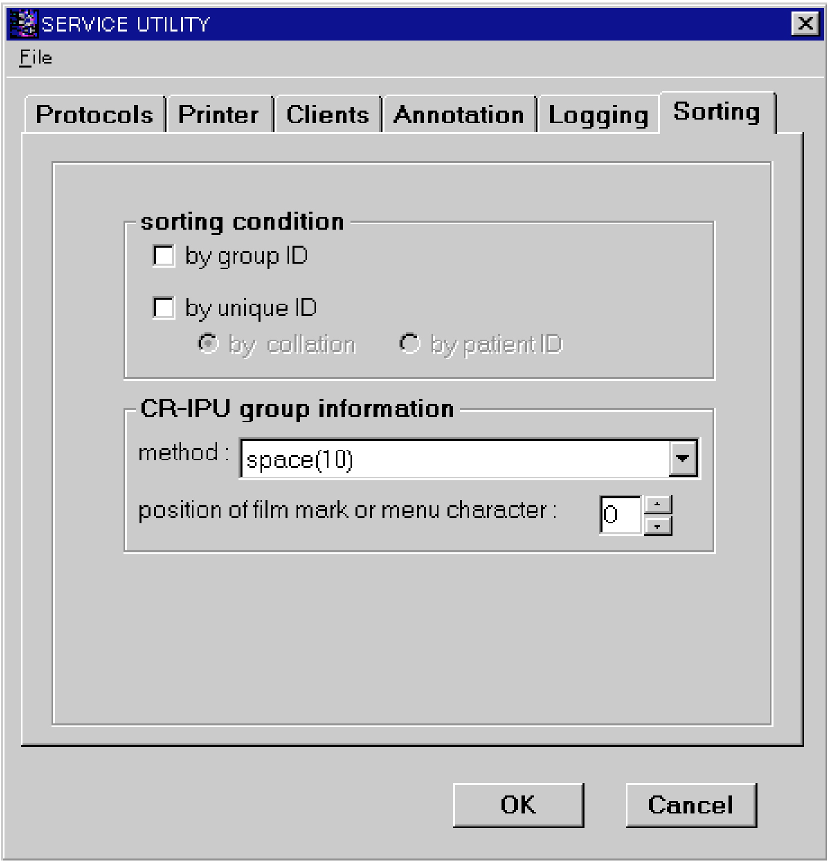
◆ NOTE ◆

- For software ver. A02 or later, specify sorting conditions according to the following procedure.
- For software ver. A00, refer to the “ ● [Sorting] Window” in the section “ ■ Using [Printer Property] window” of “7.4 Adding, Modifying, or Deleting a Printer [Printer]” for details.

■ Specifying Sorting Conditions

(1) From the [SERVICE UTILITY] window, click the [Sorting] tab.

→ The [Sorting] window appears.



SERVICE UTILITY
File
Protocols
Printer
Clients
Annotation
Logging
Sorting
OK
Cancel

sorting condition

☐ by group ID

☐ by unique ID

● by collation ○ by patient ID

CR-IPU group information

method : space(10)

position of film mark or menu character : 0

(2) Set the following items.

- [sorting condition]:
  Choose the sorting information to send to the printer.

    - [by group ID]:
      Group information from each determined protocol is sent to the printer as sorting information. The sorting conditions (specified output bins) for each group information must be specified at the printer end.
        - DICOM protocol:
          The first 10 characters of the AE Title of a client that issues a print request are the group information.
          Because the AE Title has a maximum of 16 characters, any characters exceeding the 10th character are not reflected in the group information. Therefore, if different clients have the same first 10 characters, they are not differentiated. Also, spaces will be inserted for the amount that is insufficient in AE Title not having 10 characters.
        - TOSHIBA protocol: (Software version A03 or earlier)
          The Modality Code (two characters) from a client that issues a print request plus 8 spaces are the group information.
          Confirm the content of the Modality Code on the client side. If different clients have the same Modality Code, they are not differentiated.
        - TOSHIBA protocol: (Software version A04 or later)
          The Modality Code (two characters) from a client that issues a print request plus 8 characters of the client host name are the group information.
          Confirm the content of the Modality Code on the client side. If the host name on the client is longer than 9 characters, the 8 characters from the rear of the host name are inserted. Also, spaces will be inserted for the amount that is insufficient in host name not having 8 characters.
        - FUJI Protocol (IPU Function)
          The contents selected by the following [CR-IPU group information] [method:] are the group information.

    - [by unique ID]:
      This parameter is disabled (not currently available).

- [CR-IPU group information]:
  Choose group information for FUJI protocol (IPU Function).

  - [method:]:
    Select one of the following two types of group information from the drop-down list. Do not select others because they are not currently available.
    - [space (10)]:
      Ten spaces are the group information. (default value)
      Sorting is not performed for each FUJI protocol client so use the sorting by input channel function of printer.
    - [unit code(1)space(9)]:
      FUJI protocol client's (Image Reader) unit code (1 character from A to Z) and nine spaces are the group information.
      Sorting is performed for each FUJI protocol client (Image Reader). The unit code of FUJI protocol client (Image Reader) should be checked in advance. Unit codes are set so that they are not duplicated within the same facility.
      Also, sorting is not performed for FUJI protocol client (HI-C/OD-F) other than the Image Readers.

  - [position of film mark or menu character:]:
    Set to "0" because the applicable parameter is not currently available.

◆ NOTE ◆

When connecting with FM-DP L printers equipped with a sorter, sorting information transmitted from FN-PS551 should not be "01," "02" or "03."
These numbers are duplicated and cannot be distinguished because "01," "02" and "03" are used as the default input channel codes for FM-DP L sorting.

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7.10 Saving and Restoring Settings Files

The [File] menu on the [SERVICE UTILITY] windows can be used to save service utility settings files on a floppy disk and restore settings from the floppy disk.

◆ NOTE ◆

Before proceeding with this procedure, get ready a floppy disk (DOS formatted) for saving settings files.

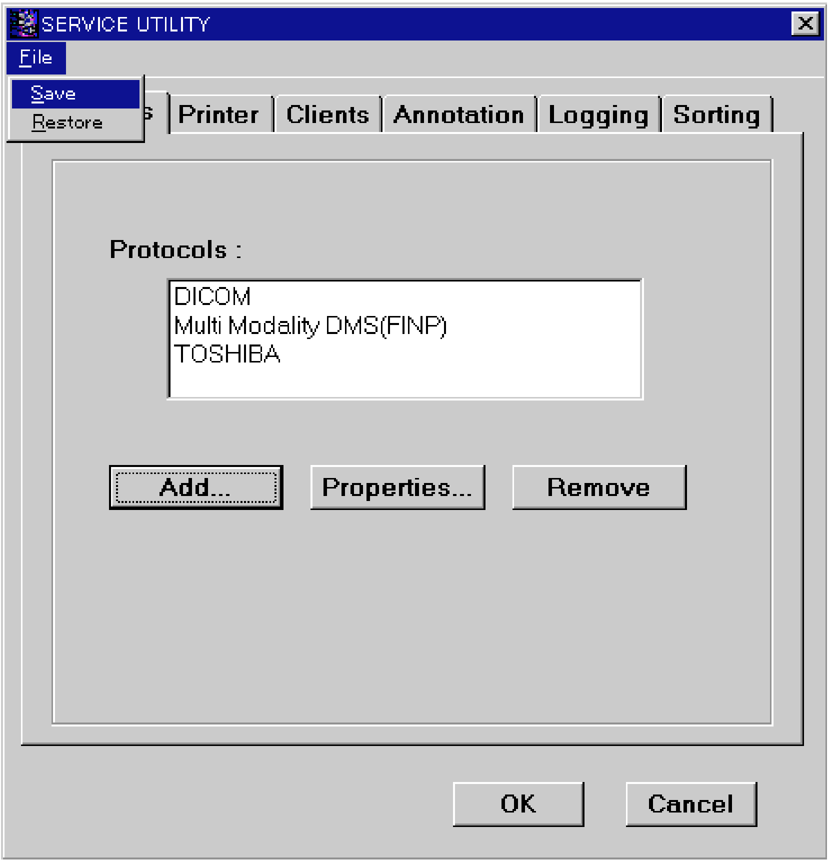
■ Saving a Settings File

CAUTION

To save a settings file, enter or modify the settings as desired, click [OK] to exit from the [SERVICE UTILITY], then restart the [SERVICE UTILITY]. The settings changed at [SERVICE UTILITY] will not be actually changed if the data is saved without clicking [OK].

(1) Insert a floppy disk for saving a settings file into the disk drive.

(2) From the [File] menu, click on [Save].


SERVICE UTILITY
File
Save
Restore
Printer
Clients
Annotation
Logging
Sorting
Add...
Properties...
Remove
OK
Cancel

Protocols :

DICOM
Multi Modality DMS(FINP)
TOSHIBA

→ The settings file is saved onto the floppy disk.

◆ REFERENCE ◆

The files saved on the floppy disk are:

Toshiba.dat
Dicom.dat
Pcpssys.dat
Imginf.prm
hosts
Depcode.prm (supporting software ver. A02 or later)
Filing.prm (supporting software ver. A02 or later)
Finp.dat (supporting software ver. A02 or later)

Note that these files cannot be opened nor edited.

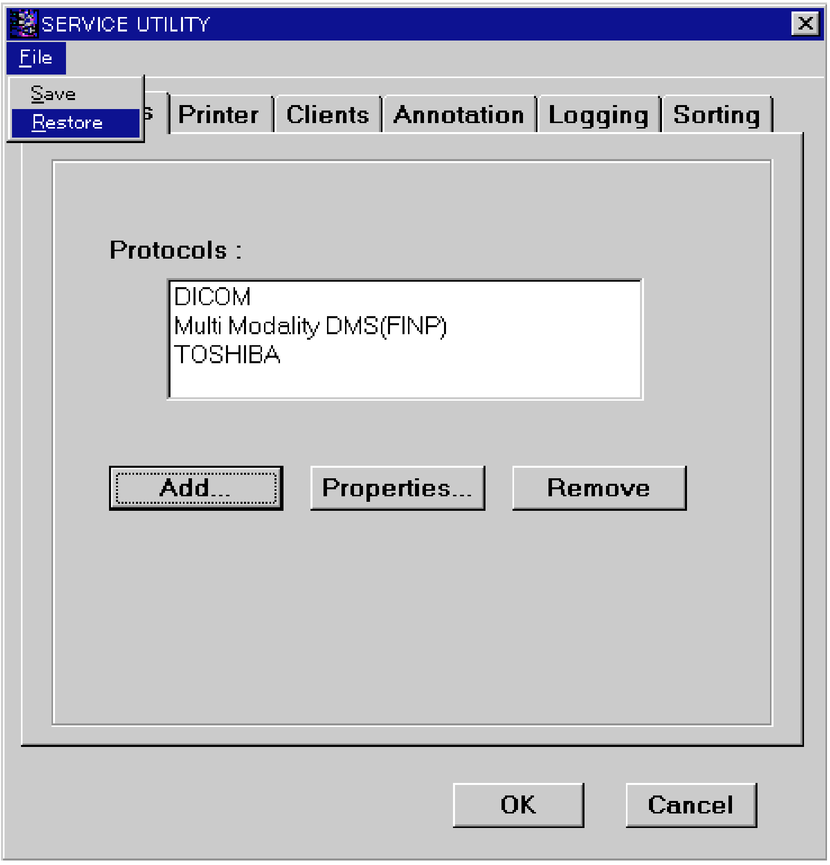
■ Restoring a Settings File

CAUTION

Ensure that the restore disk is write-protected (write-disabled) to prevent data and programs in it from being modified or erased accidentally.

(1) Insert the floppy disk containing the files saved into the FD drive.

(2) From the [File] menu, click on [Restore].


SERVICE UTILITY
File
Save
Restore
Printer
Clients
Annotation
Logging
Sorting
Protocols :
DICOM
Multi Modality DMS(FINP)
TOSHIBA
Add...
Properties...
Remove
OK
Cancel

→ The data stored in the settings file on the floppy disk are restored from it.

7.11 Analysis Information Collection

Various files necessary for analysis of defects occurring on FN-PS551 can be collected on a floppy disk using [Utility] menu in the [SERVICE UTILITY] Window.

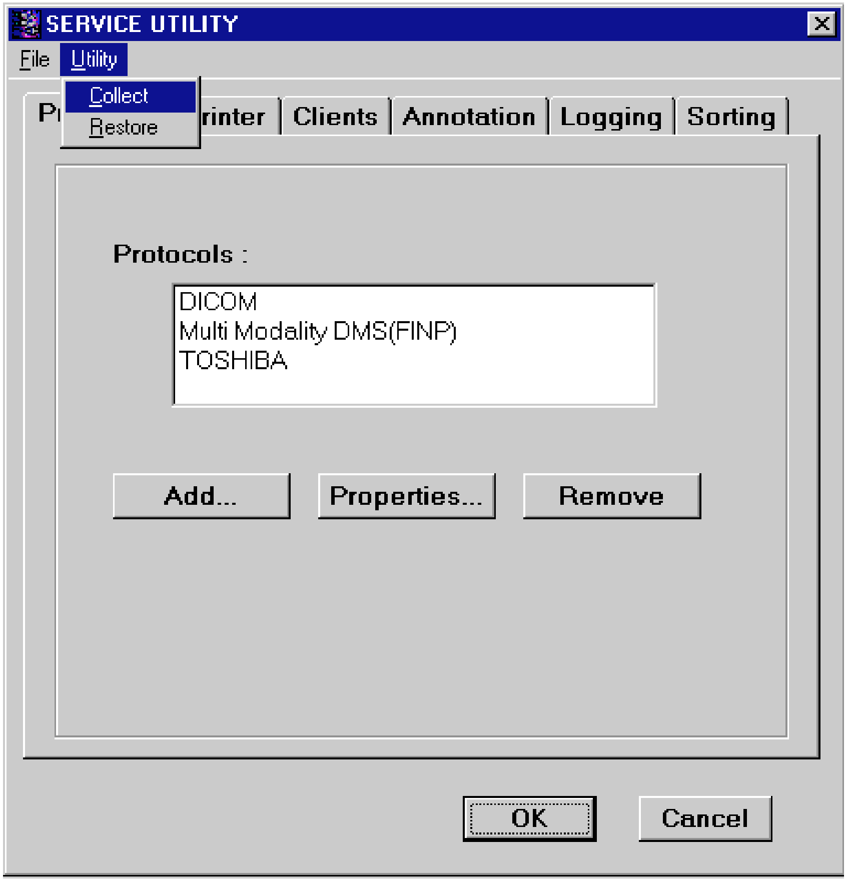
CAUTION

Never use [Utility] menu at installation and normal service because they are used to analyze the design and configuration of the FN-PS551 application. Only if a request is made by the Service headquarters to use the settings, make a use of them according to their instructions. Also, [Restore] in [Utility] menu should not be used.

◆ NOTE ◆

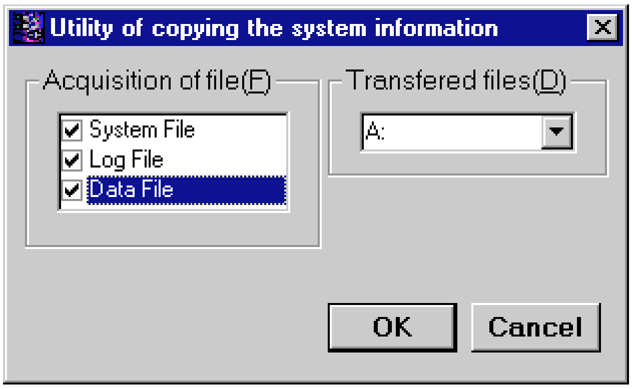
- This function applies to software ver. A05 or later.
- Set acquisition of communication record between network interface devices and printers as log information using [Logging] setting in “7.8 Specifying the Acquisition of Log Data [Logging]”. Under this status, start FN-PS551 application in order to actually print out from each client, and then execute the following steps. If log information acquisition is not set, log file necessary for analysis can not be collected even if the following steps are executed.
- Before the following steps, prepare a floppy disk (DOS formatted) for collecting analysis information. At least 3 disks are needed. If unprinted image data remains in output cue, more disks may be necessary depending on the image data volume.

(1) From the [Utility] menu, click on [collect].



DICOM
Multi Modality DMS(FINP)
TOSHIBA

→ Dialog for selection of file to be acquired and specifications of transferred file appears.


Utility of copying the system information

Acquisition of file(F)

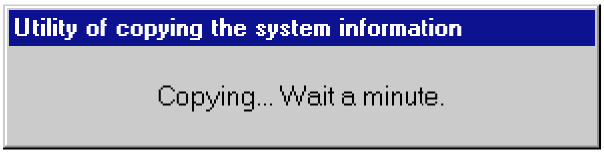
☑ System File
☑ Log File
☑ Data File

Transfered files(D)

A:

(2) Check that “System File”, “Log File” and “Data File” in [Acquisition of file] list are checked, insert floppy disk for collecting analysis information in the floppy disk drive and click [OK].

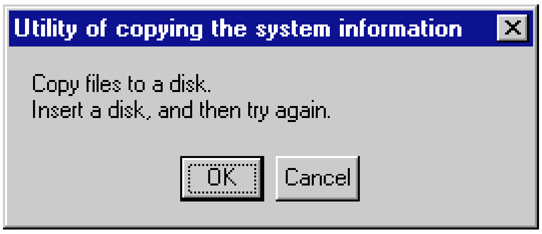
→ “Copying” message appears and analysis information is stored on floppy disk.


Utility of copying the system information

Copying... Wait a minute.

◆ NOTE ◆

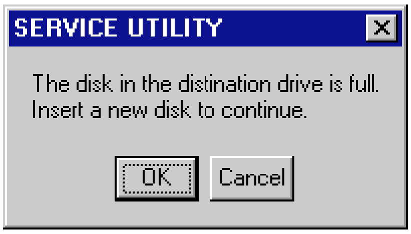
If above mentioned step is executed without inserting floppy disk, a message prompting disk insertion appears.


Utility of copying the system information

Copy files to a disk.
Insert a disk, and then try again.

If this appears, insert a disk and click [OK].

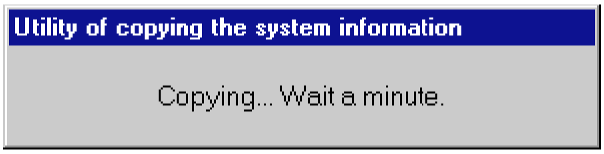
(3) When a disk becomes full, a message prompting change of disk appears.


SERVICE UTILITY

The disk in the distination drive is full.
Insert a new disk to continue.

(4) Change to the next floppy disk for collecting analysis information and click [OK].

→ “Copying” message appears again and analysis information is stored on the floppy disk.



Copying... Wait a minute.

(5) When the next disk becomes full the message shown in (3) appears. Change to the next floppy disk for collecting analysis information, and repeat step (4). Repeat these steps until the message mentioned in (6) appears.

(6) When copying of analysis information to floppy disk is complete, one of the messages shown below will appear.

→ Copy completion message when no image data is present in output cue.

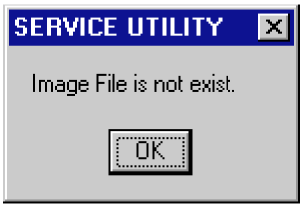
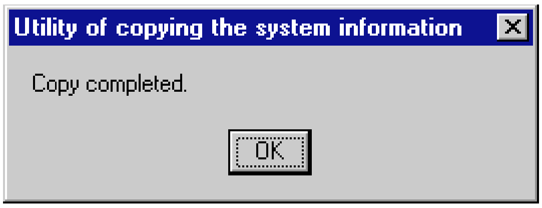


Image File is not exist.

→ Copy completion message when image data is present in output cue.



Copy completed.

(7) Click [OK] and remove the floppy disk for collecting analysis information from the floppy disk drive.

(8) Click [Cancel] in dialog for selection of file to be acquired and specifications of transferred file to finish collection of analysis information.

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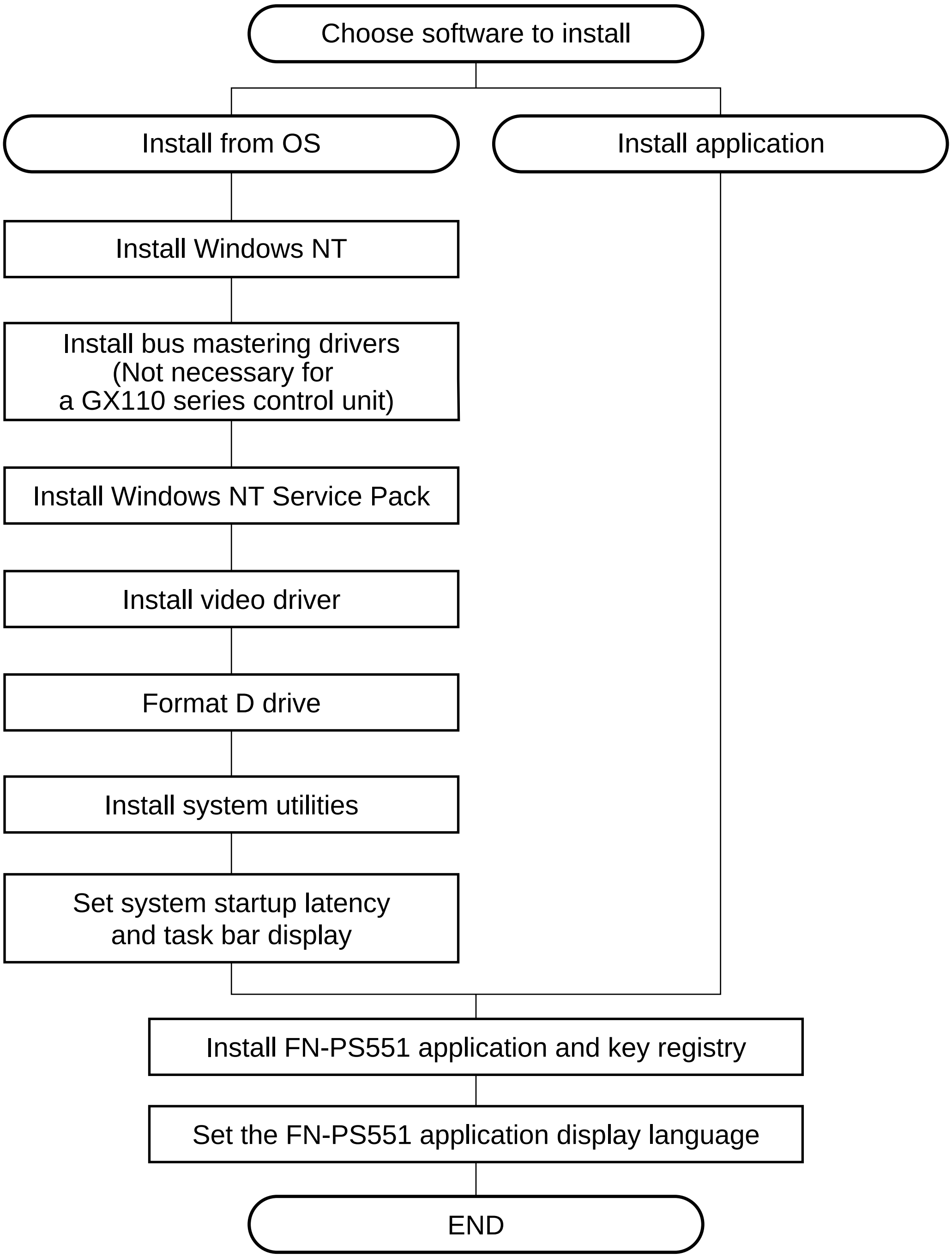
8. Software Installation

◆ **NOTE** ◆

The software installation procedure shown in this section applies to DELL Optiplex GX1/GX110 series control unit (PC) models. For DELL Optiplex GX150 series, refer to “10. Installing Software for GX150 Series Control Unit”.
For DELL OptiPlex GX260 series, refer to “11. Installing Software for GX260 Series Control Unit”.

■ Software Installation Flowchart


Choose software to install
Install from OS
Install application
Install Windows NT
Install bus mastering drivers (Not necessary for a GX110 series control unit)
Install Windows NT Service Pack
Install video driver
Format D drive
Install system utilities
Set system startup latency and task bar display
Install FN-PS551 application and key registry
Set the FN-PS551 application display language
END

FP4F0000.EPS

CAUTION

After successfully completing the software installation, start up the service utility and set each configuration.
If the service utility settings file has been saved onto a floppy disk during the normal operation of the FN-PS551 system prior to beginning the software reinstallation, the settings can be restored from this file.

◆ NOTE ◆

Beyond this point, parts of the software installation procedure differ depending on whether the control unit (PC) model is DELL OptiPlex GX1 series or GX110 series. The differences are specified in the following steps, so refer to the relevant part for installation.

8.1 Installing Windows NT

CAUTION

- Install Windows NT after repairing a faulty control unit (PC) or replacing an internal HDD in the control unit.
- Once Windows NT is reinstalled, all driver software and FN-PS551 applications software files in the C drive (C:) are erased. In this case, reinstall all drivers and the FN-PS551 application as well.

● The following will be required for the installation;

- Product ID (Number indicated on the cover of the “Windows NT Workstation For distribution with a new PC only” guide book.)
- “Windows NT Workstation For distribution Only with a New PC” CD-ROM .... X 1
- Windows NT Workstation Setup Disks #1-3 .... X 3
- 3COM 3C90X Fast EtherLink XL NIC Drivers Disk (For a GX1 series control unit) .... X 1
- 3COM EtherDisk 5.04 Disk 1, 2 (For a GX110 series control unit) .... X 2

CAUTION

Ensure that the install disk is write-protected (write-disabled) to prevent data and programs in it from being modified or erased accidentally.

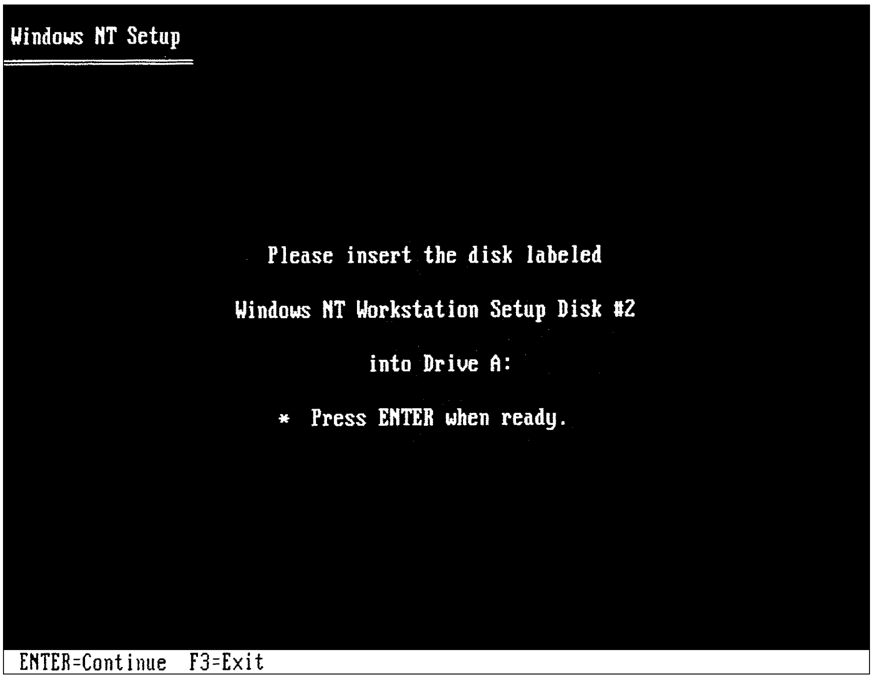
- Starting the Installer

(1) With the power off, insert the disk labeled “Windows NT Workstation Setup Disk #1” into the floppy disk drive. Turn on the monitor, and then the control unit.

CAUTION

Make sure that the power is switched off before beginning this procedure as the computer starts up from “Setup Disk #1” as the boot device.

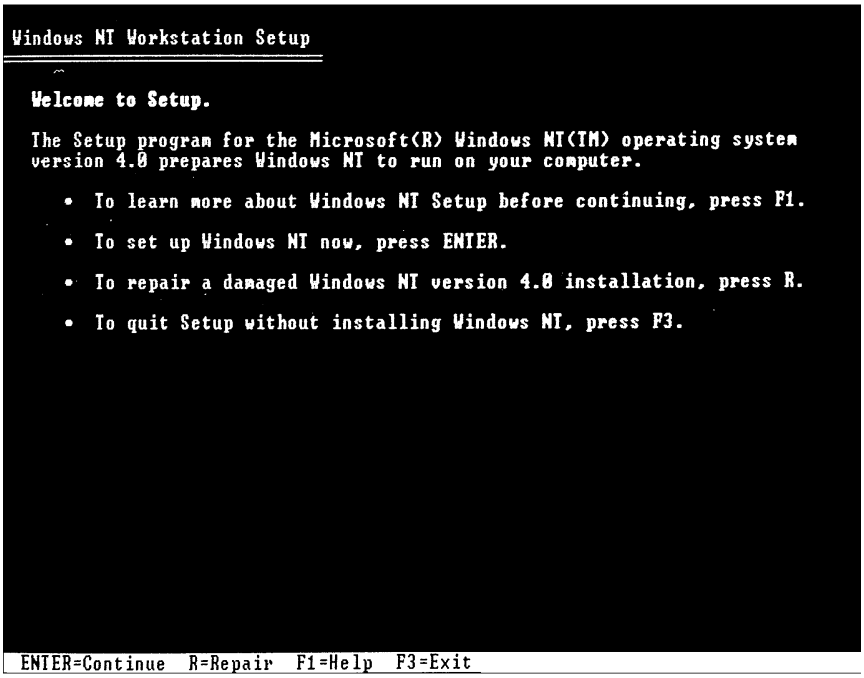
→ Once the system has finished reading the first disk (this takes approximately 90 seconds), the following messages [Please insert the disk labeled Windows NT Workstation Setup Disk #2 into Drive A:] appears.



```
Windows NT Setup

Please insert the disk labeled

Windows NT Workstation Setup Disk #2

into Drive A:

* Press ENTER when ready.

ENTER=Continue  F3=Exit
```

(2) Remove the Disk #1 and insert the “Windows NT Workstation Setup Disk #2” into the floppy disk drive and press <Enter> key.

→ The setup program starts and the [Welcome to Setup] screen appears about two minutes later.



```
Windows NT Workstation Setup
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  Welcome to Setup.

  The Setup program for the Microsoft(R) Windows NT(TM) operating system
  version 4.0 prepares Windows NT to run on your computer.

      •  To learn more about Windows NT Setup before continuing, press F1.

      •  To set up Windows NT now, press ENTER.

      •  To repair a damaged Windows NT version 4.0 installation, press R.

      •  To quit Setup without installing Windows NT, press F3.

 ENTER=Continue  R=Repair  F1=Help  F3=Exit
```
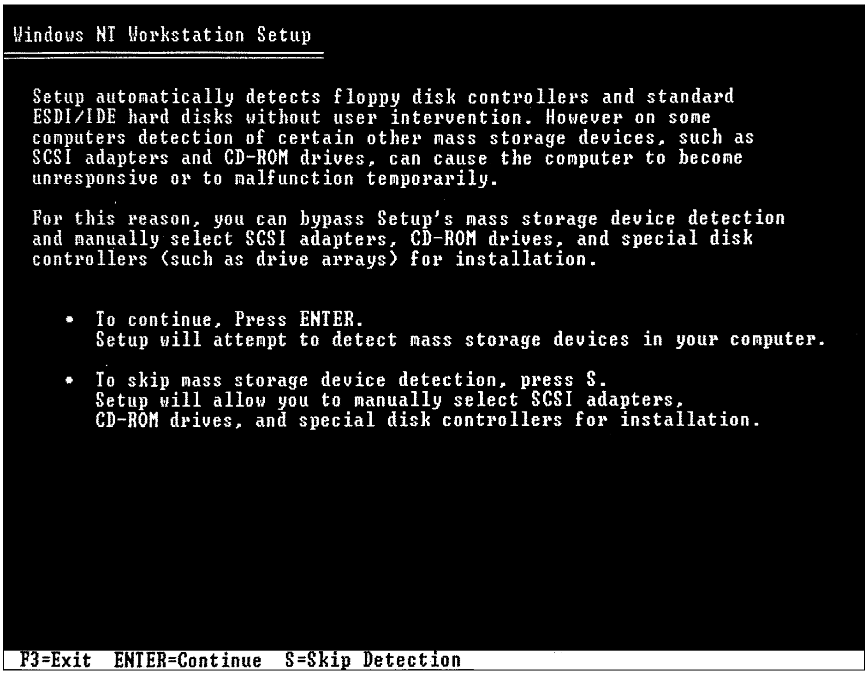

(3) Press <Enter> key to continue the setup procedure.

→ The following screen [Setup automatically detects...] for automatic detection of mass storage devices such as CD-ROM and HDD appears.



```
Windows NT Workstation Setup
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  Setup automatically detects floppy disk controllers and standard
  ESDI/IDE hard disks without user intervention. However on some
  computers detection of certain other mass storage devices, such as
  SCSI adapters and CD-ROM drives, can cause the computer to become
  unresponsive or to malfunction temporarily.

  For this reason, you can bypass Setup's mass storage device detection
  and manually select SCSI adapters, CD-ROM drives, and special disk
  controllers (such as drive arrays) for installation.


      •  To continue, Press ENTER.
         Setup will attempt to detect mass storage devices in your computer.

      •  To skip mass storage device detection, press S.
         Setup will allow you to manually select SCSI adapters,
         CD-ROM drives, and special disk controllers for installation.

 F3=Exit  ENTER=Continue  S=Skip Detection
```
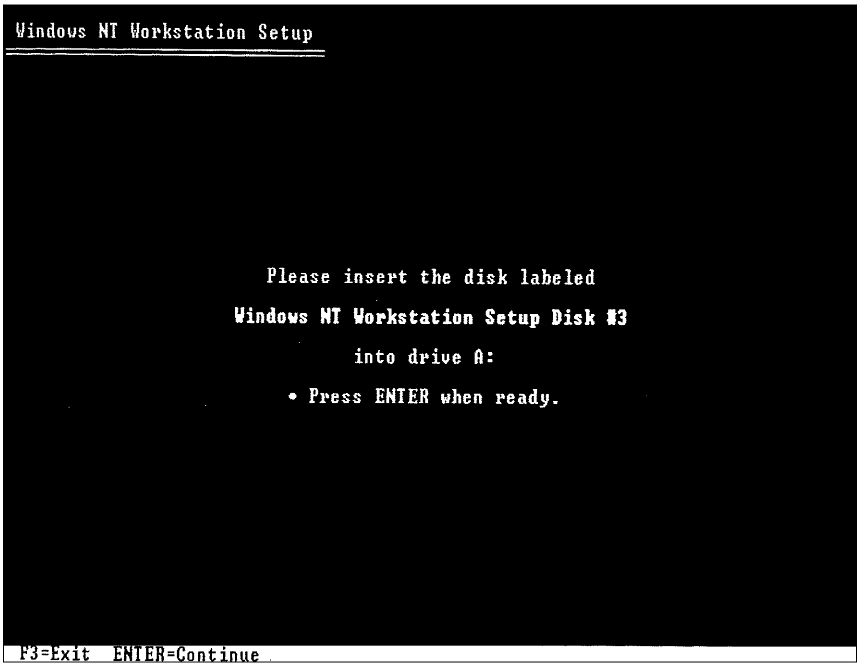

(4) Press <Enter> key to continue automatic detection.

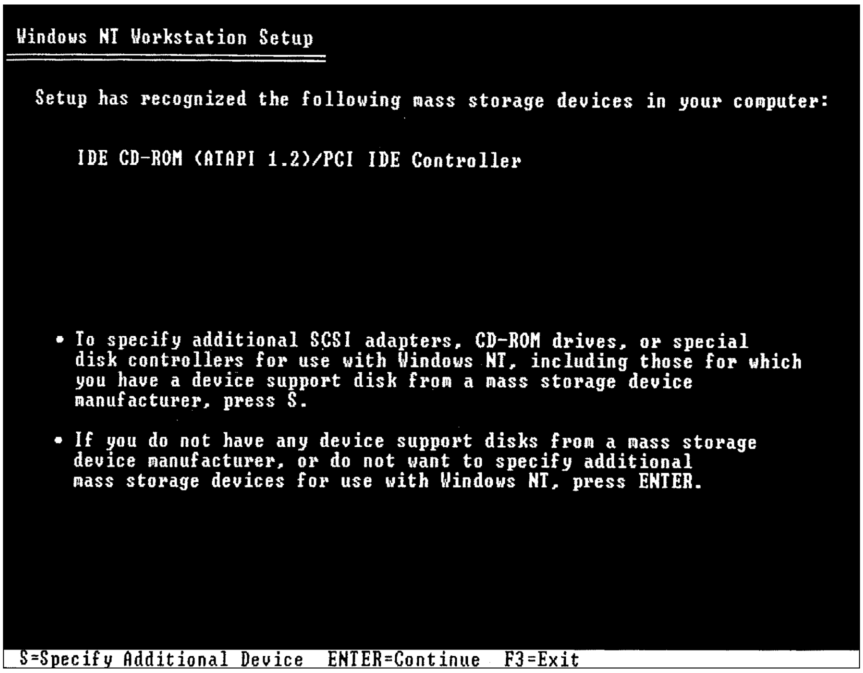
→ The message [Please insert the disk labeled Windows NT Workstation Setup Disk #3 into Drive A:] appears.



```
Windows NT Workstation Setup

                    Please insert the disk labeled

                  Windows NT Workstation Setup Disk #3

                             into drive A:

                        • Press ENTER when ready.

 F3=Exit  ENTER=Continue
```

(5) Remove the Disk #2 and insert the “Windows NT Workstation Setup Disk #3” into the floppy disk drive and press <Enter> key.

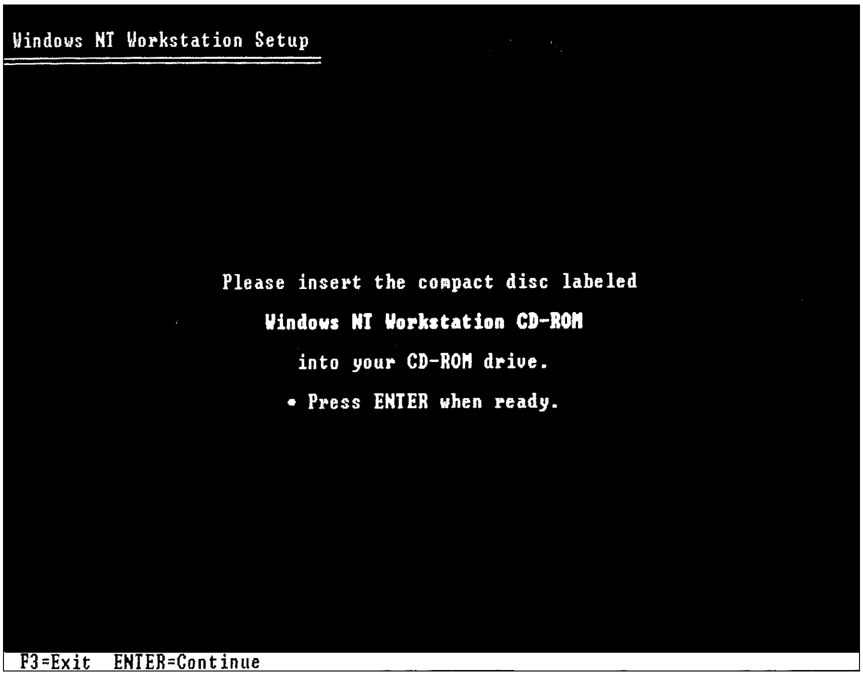
→ After approximately one minute, the screen displays the storage devices detected in detail.



```
Windows NT Workstation Setup

  Setup has recognized the following mass storage devices in your computer:

      IDE CD-ROM (ATAPI 1.2)/PCI IDE Controller

    • To specify additional SCSI adapters, CD-ROM drives, or special
      disk controllers for use with Windows NT, including those for which
      you have a device support disk from a mass storage device
      manufacturer, press S.

    • If you do not have any device support disks from a mass storage
      device manufacturer, or do not want to specify additional
      mass storage devices for use with Windows NT, press ENTER.

 S=Specify Additional Device  ENTER=Continue  F3=Exit
```

(6) Press <Enter> key to proceed.

→ When all the drivers are installed, after approximately one minute, the message [Please insert the compact disk labeled Windows NT Workstation CD-ROM into your CD-ROM drive.] appears.



```
Windows NT Workstation Setup
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                 Please insert the compact disc labeled

                      Windows NT Workstation CD-ROM

                         into your CD-ROM drive.

                        • Press ENTER when ready.



 F3=Exit   ENTER=Continue
```
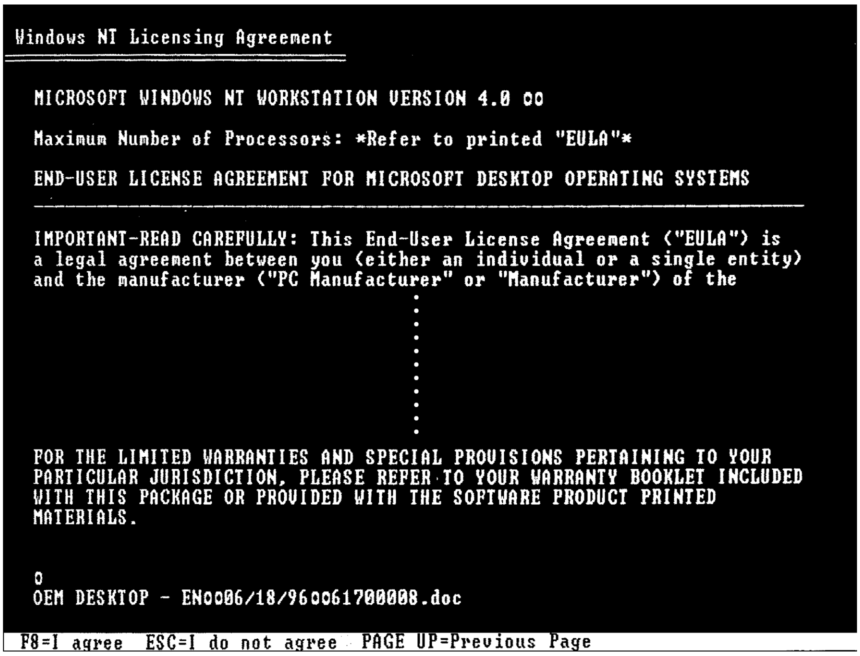

(7) Insert the CD-ROM labeled “Windows NT Workstation For Distribution Only with a New PC” . Check that the CD-ROM drive access lamp goes on and out again, then press <Enter> key.

→ The [Windows NT Licensing Agreement] screen appears.



```
Windows NT Licensing Agreement
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  MICROSOFT WINDOWS NT WORKSTATION VERSION 4.0 oo

  Maximum Number of Processors: *Refer to printed "EULA"*

  END-USER LICENSE AGREEMENT FOR MICROSOFT DESKTOP OPERATING SYSTEMS
  ------------------------------------------------------------------

  IMPORTANT-READ CAREFULLY: This End-User License Agreement ("EULA") is
  a legal agreement between you (either an individual or a single entity)
  and the manufacturer ("PC Manufacturer" or "Manufacturer") of the
                                .
                                .
                                .
                                .
                                .

  FOR THE LIMITED WARRANTIES AND SPECIAL PROVISIONS PERTAINING TO YOUR
  PARTICULAR JURISDICTION, PLEASE REFER TO YOUR WARRANTY BOOKLET INCLUDED
  WITH THIS PACKAGE OR PROVIDED WITH THE SOFTWARE PRODUCT PRINTED
  MATERIALS.


  0
  OEM DESKTOP - EN0006/18/960061700008.doc

 F8=I agree  ESC=I do not agree  PAGE UP=Previous Page
```
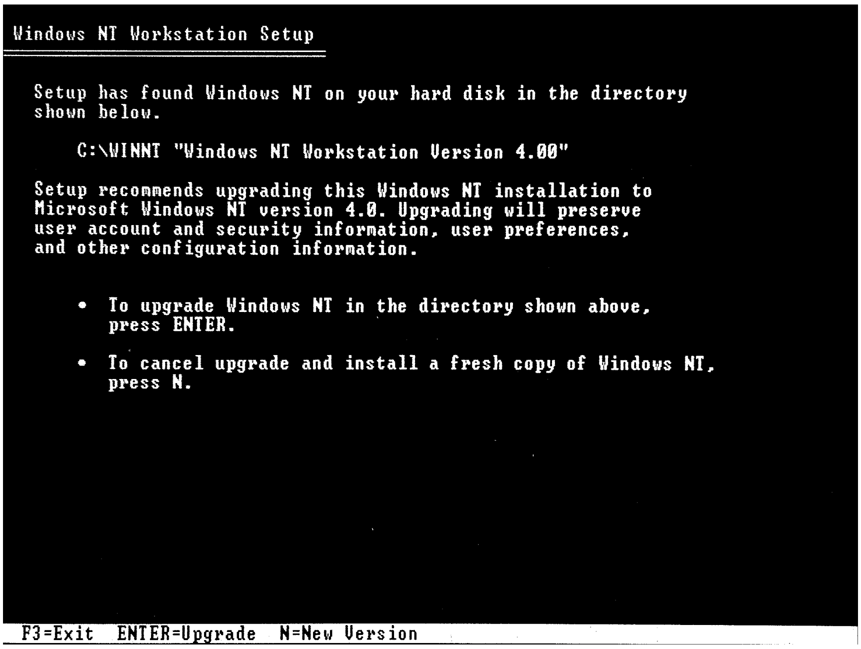

(8) Scroll it down using <Page Down> key. At the end, press <F8> key to agree with the conditions and terms of the agreement.

◆ NOTE ◆

It is only possible to press <F8> key at the end of the screen.

→ The following screen appears prompting to enter an ENTER or N for upgrading Windows NT or reinstalling this Windows NT installation.



```
Windows NT Workstation Setup
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  Setup has found Windows NT on your hard disk in the directory
  shown below.

      C:\WINNT "Windows NT Workstation Version 4.00"

  Setup recommends upgrading this Windows NT installation to
  Microsoft Windows NT version 4.0. Upgrading will preserve
  user account and security information, user preferences,
  and other configuration information.


      •  To upgrade Windows NT in the directory shown above,
         press ENTER.

      •  To cancel upgrade and install a fresh copy of Windows NT,
         press N.

 F3=Exit  ENTER=Upgrade  N=New Version
```
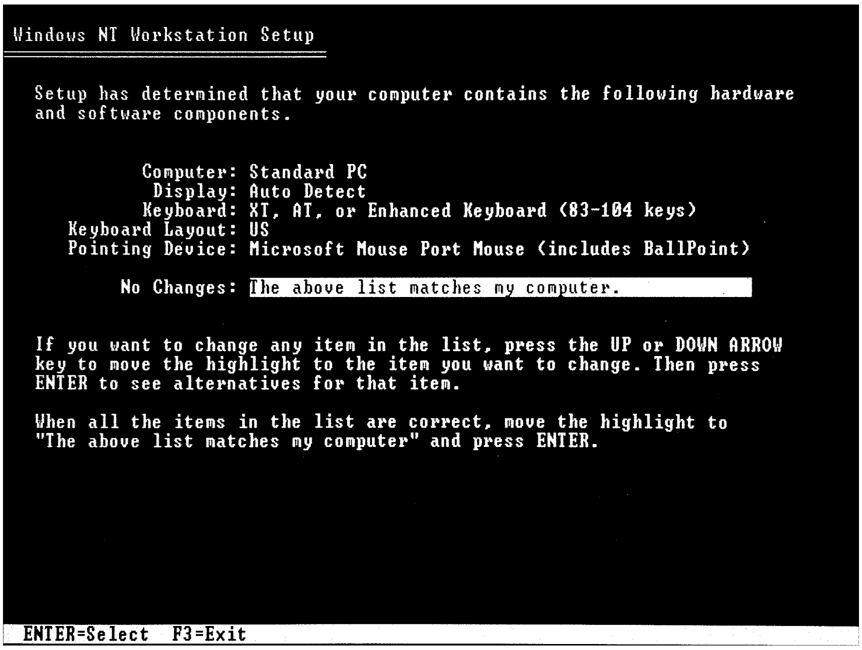

(9) Press <N> key to install Windows NT again.

→ The next screen lists the detected software and hardware components.



```
Windows NT Workstation Setup
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  Setup has determined that your computer contains the following hardware
  and software components.


            Computer: Standard PC
             Display: Auto Detect
            Keyboard: XT, AT, or Enhanced Keyboard (83-104 keys)
     Keyboard Layout: US
     Pointing Device: Microsoft Mouse Port Mouse (includes BallPoint)

          No Changes: The above list matches my computer.


  If you want to change any item in the list, press the UP or DOWN ARROW
  key to move the highlight to the item you want to change. Then press
  ENTER to see alternatives for that item.

  When all the items in the list are correct, move the highlight to
  "The above list matches my computer" and press ENTER.

 ENTER=Select  F3=Exit
```
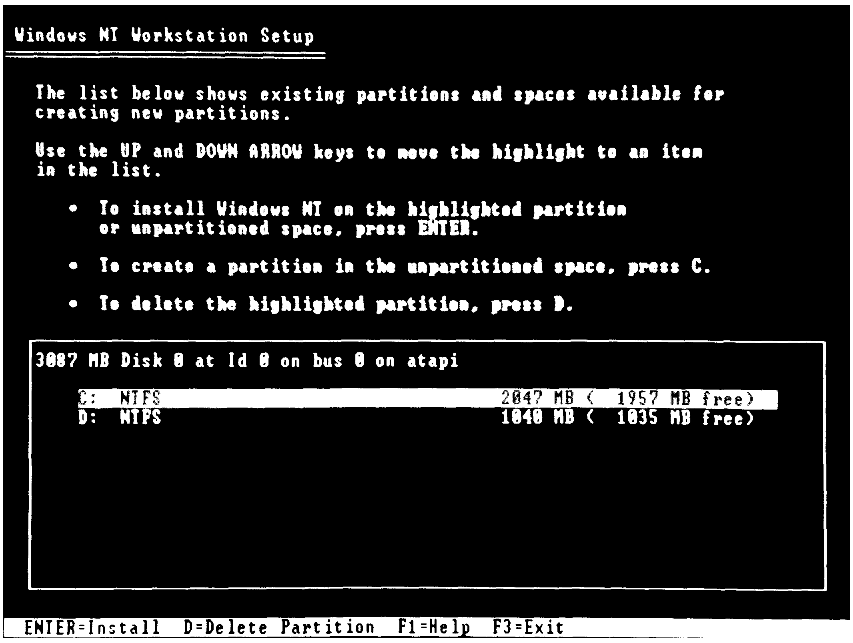

(10) Check that the all the items in the list are correct and press <Enter> key.

If not correct, repeat the setting procedure by referring to the explanation on the screen.

→ The screen for selecting partitions to install appears.



```
Windows NT Workstation Setup
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   The list below shows existing partitions and spaces available for
   creating new partitions.

   Use the UP and DOWN ARROW keys to move the highlight to an item
   in the list.

      •  To install Windows NT on the highlighted partition
         or unpartitioned space, press ENTER.

      •  To create a partition in the unpartitioned space, press C.

      •  To delete the highlighted partition, press D.

  3087 MB Disk 0 at Id 0 on bus 0 on atapi

      C:  NTFS                                2047 MB (  1957 MB free)
      D:  NTFS                                1040 MB (  1035 MB free)

 ENTER=Install  D=Delete Partition  F1=Help  F3=Exit
```

◆ NOTE ◆

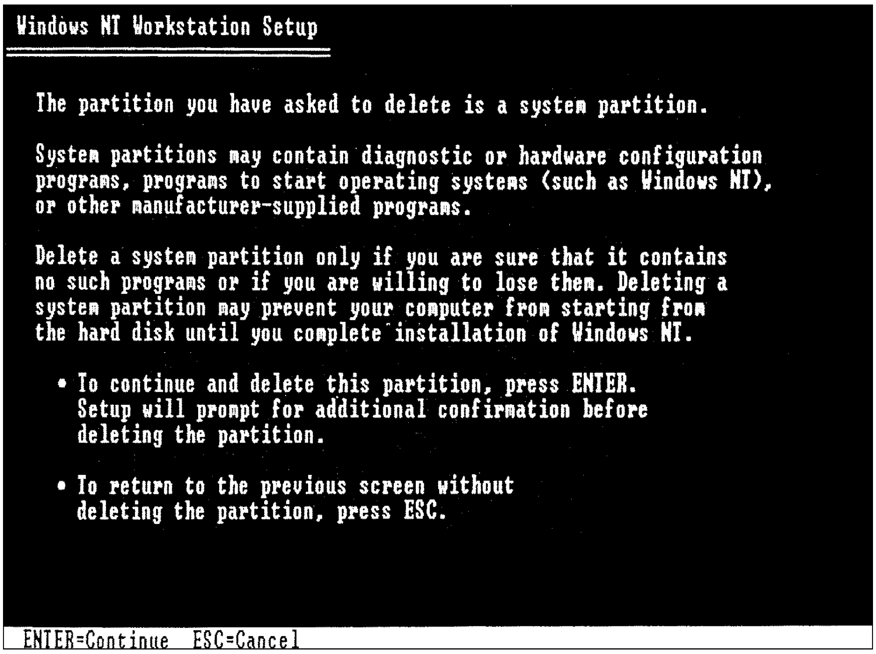
The illustration of the step (10) is an example for a 3.2 GB hard disk drive. For a hard disk drive of over 6.4 GB, partition size for “C:” is displayed as “2047 MB”, however, for partitions after “D:”, partitions and sizes displayed vary depending on the capacity of the hard disk drive.

However, vacant capacity of partitions varies depending on usage status.

- Creating the Partition

(1) Check that the “C:” partition is highlighted, then press <D> key to delete the partition.

→ The prompt screen for deleting the partition appears.



```
Windows NT Workstation Setup
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  The partition you have asked to delete is a system partition.

  System partitions may contain diagnostic or hardware configuration
  programs, programs to start operating systems (such as Windows NT),
  or other manufacturer-supplied programs.

  Delete a system partition only if you are sure that it contains
  no such programs or if you are willing to lose them. Deleting a
  system partition may prevent your computer from starting from
  the hard disk until you complete installation of Windows NT.

     • To continue and delete this partition, press ENTER.
       Setup will prompt for additional confirmation before
       deleting the partition.

     • To return to the previous screen without
       deleting the partition, press ESC.

 ENTER=Continue  ESC=Cancel
```
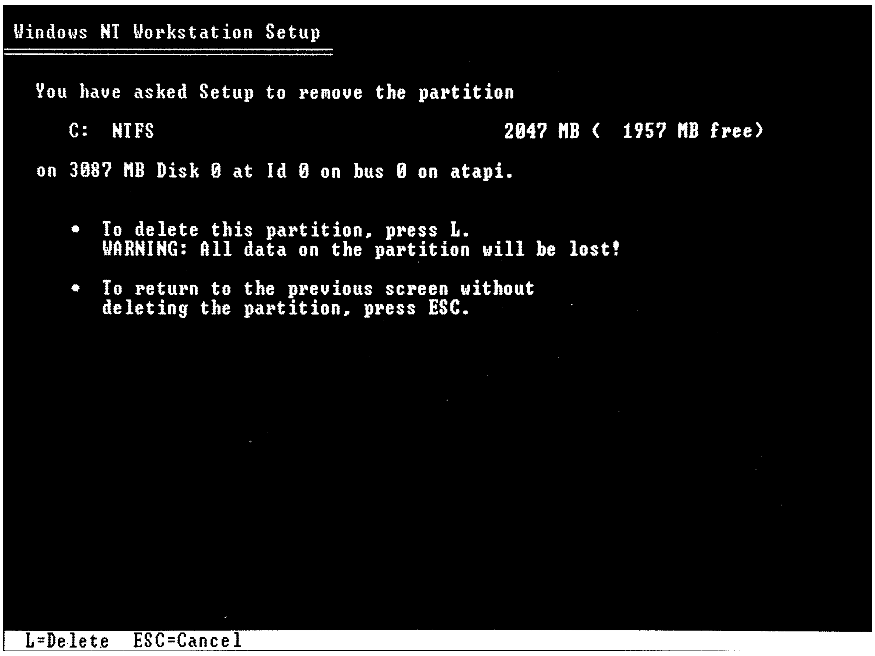

(2) Press <Enter> key to proceed.

→ The execution screen for deleting the partition appears.



```
Windows NT Workstation Setup
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  You have asked Setup to remove the partition

     C:  NTFS                              2047 MB (  1957 MB free)

  on 3087 MB Disk 0 at Id 0 on bus 0 on atapi.

      •  To delete this partition, press L.
         WARNING: All data on the partition will be lost!

      •  To return to the previous screen without
         deleting the partition, press ESC.

 L=Delete  ESC=Cancel
```
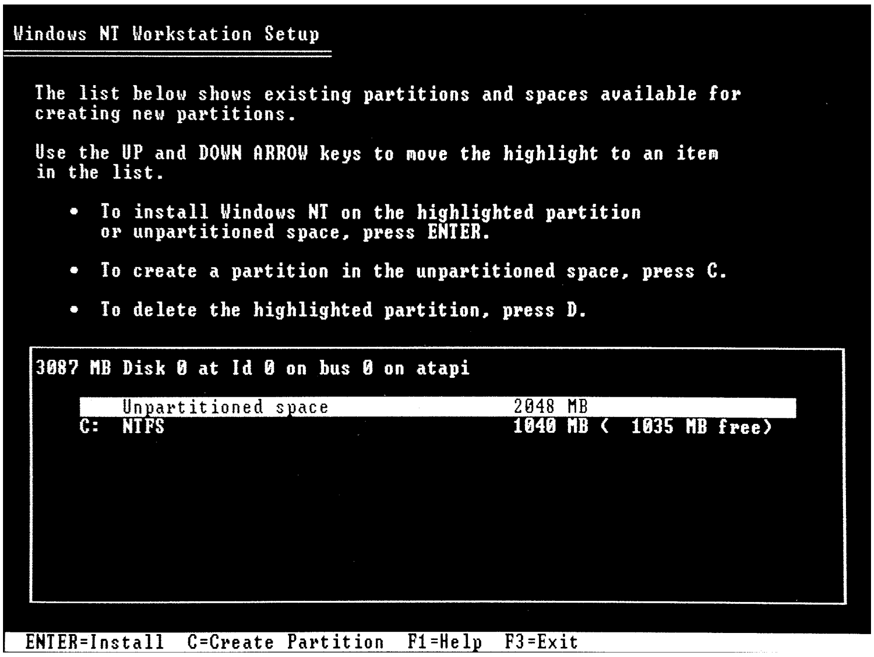

(3) Press <L> (delete) key to delete the system partition.

→ The screen for selecting partitions to install reappears. Note that the “D:” partition in step (10) of the “ ● Starting the Installer” is now replaced as the “C:” partition.

◆ NOTE ◆

For a hard disk drive of over 6.4 GB, each remaining partition is moved up and displayed.



```
Windows NT Workstation Setup
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  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

     •  To install Windows NT on the highlighted partition
        or unpartitioned space, press ENTER.

     •  To create a partition in the unpartitioned space, press C.

     •  To delete the highlighted partition, press D.

  3087 MB Disk 0 at Id 0 on bus 0 on atapi

         Unpartitioned space                    2048 MB
     C:  NTFS                                   1040 MB (  1035 MB free)

  ENTER=Install  C=Create Partition  F1=Help  F3=Exit
```
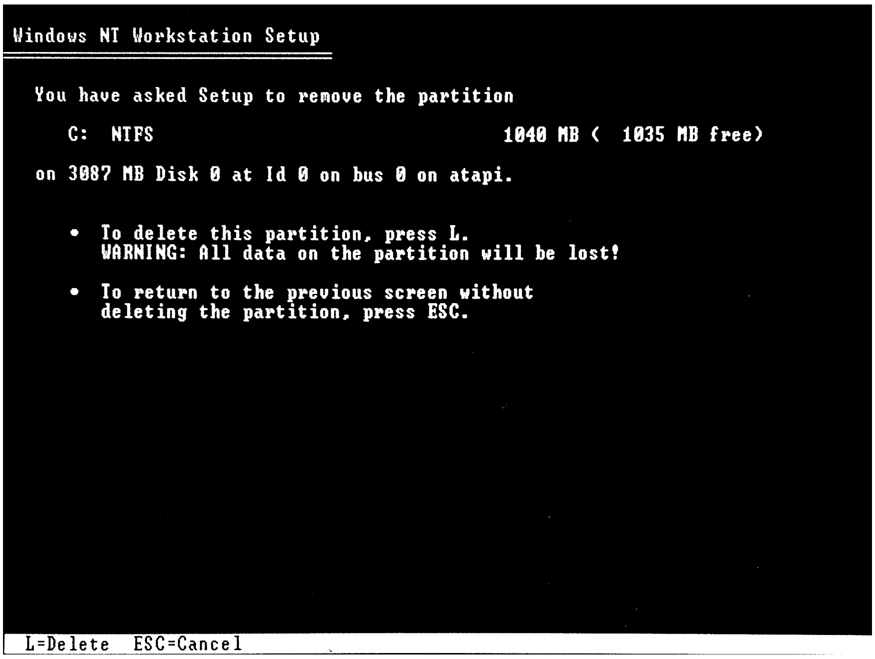

(4) Move the cursor to the “C:” partition and press <D> key (delete partition).

→ The execution screen for deleting the partition appears.



```
Windows NT Workstation Setup
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  You have asked Setup to remove the partition

     C:  NTFS                                  1040 MB (  1035 MB free)

  on 3087 MB Disk 0 at Id 0 on bus 0 on atapi.

     •  To delete this partition, press L.
        WARNING: All data on the partition will be lost!

     •  To return to the previous screen without
        deleting the partition, press ESC.

  L=Delete  ESC=Cancel
```
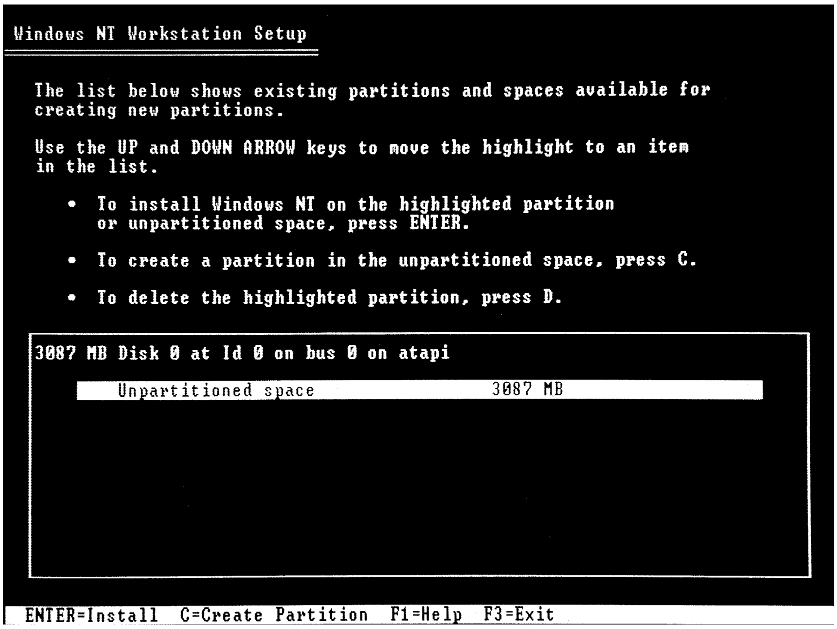

(5) Press <L> (delete) key to delete the partition.

→ The screen for selecting partitions to install reappears. All default partitions are deleted.

◆ **NOTE** ◆

If partitions remain in the case of a hard disk drive of over 6.4 GB, repeat steps (4) and (5) in order to delete all remaining partitions. “Unpartitioned space xxxx MB” displayed after deleting all these partitions varies depending on the capacity of the hard disk drive.



```
Windows NT Workstation Setup
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  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

      •  To install Windows NT on the highlighted partition
         or unpartitioned space, press ENTER.

      •  To create a partition in the unpartitioned space, press C.

      •  To delete the highlighted partition, press D.

  3087 MB Disk 0 at Id 0 on bus 0 on atapi

         Unpartitioned space                      3087 MB

 ENTER=Install  C=Create Partition  F1=Help  F3=Exit
```
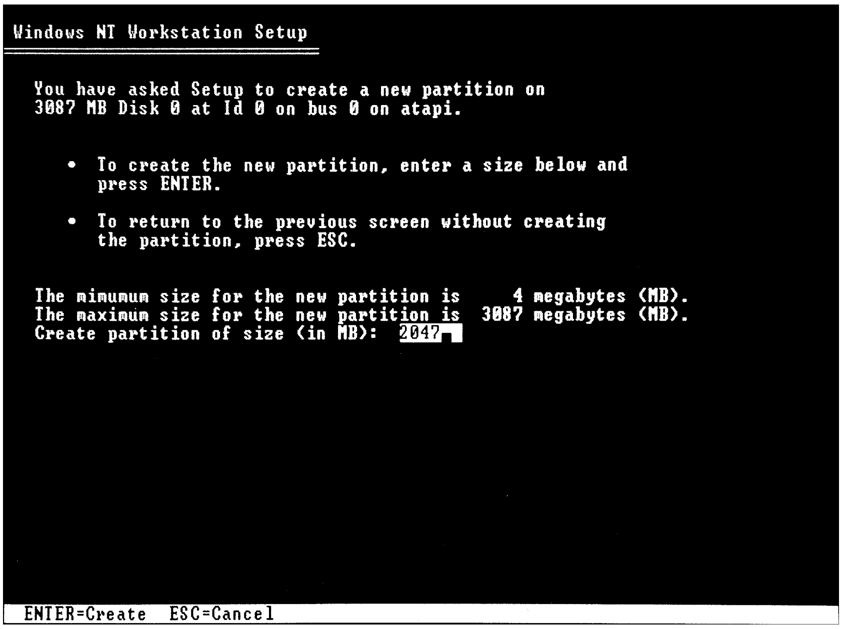

(6) Check that the “Unpartitioned space” is highlighted, then press <C> key to create a partition.

→ The creation screen for a new partition appears.



```
Windows NT Workstation Setup
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  You have asked Setup to create a new partition on
  3087 MB Disk 0 at Id 0 on bus 0 on atapi.

      •  To create the new partition, enter a size below and
         press ENTER.

      •  To return to the previous screen without creating
         the partition, press ESC.

  The mimumum size for the new partition is     4 megabytes (MB).
  The maximum size for the new partition is  3087 megabytes (MB).
  Create partition of size (in MB):  2047

 ENTER=Create  ESC=Cancel
```
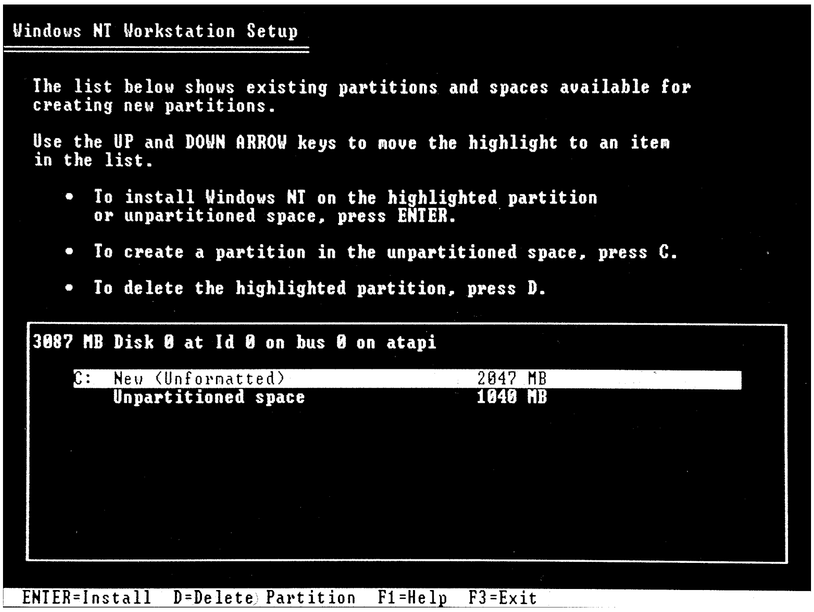

(7) Press <Back Space> key to delete the default value for the [Create partition of size (in MB)]. Enter “`2047`” for the system partition size in it and press <Enter> key.

◆ REFERENCE ◆

Press <Num Lock> key to enable the ten-key before entering numeric values.

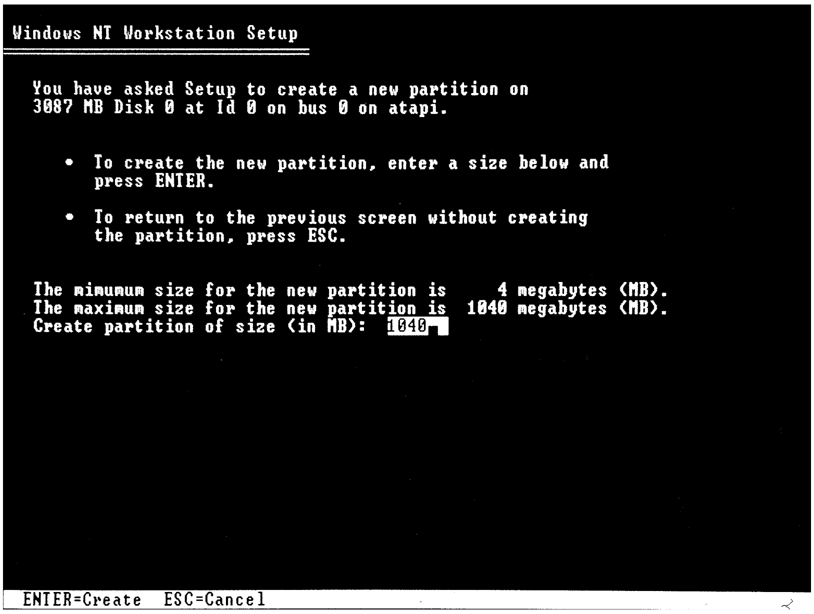
→ The screen for selecting partitions to install reappears. The newly created partition is specified as “C: New (Unformatted) 2047 MB”.



```
Windows NT Workstation Setup

  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

     •  To install Windows NT on the highlighted partition
        or unpartitioned space, press ENTER.

     •  To create a partition in the unpartitioned space, press C.

     •  To delete the highlighted partition, press D.

  3087 MB Disk 0 at Id 0 on bus 0 on atapi

      C:  New (Unformatted)                  2047 MB
          Unpartitioned space                1040 MB

 ENTER=Install  D=Delete Partition  F1=Help  F3=Exit
```

(8) Move the cursor to “Unpartitioned space”, and press <C> key to create the partition.

→ The creation screen for a new partition appears.

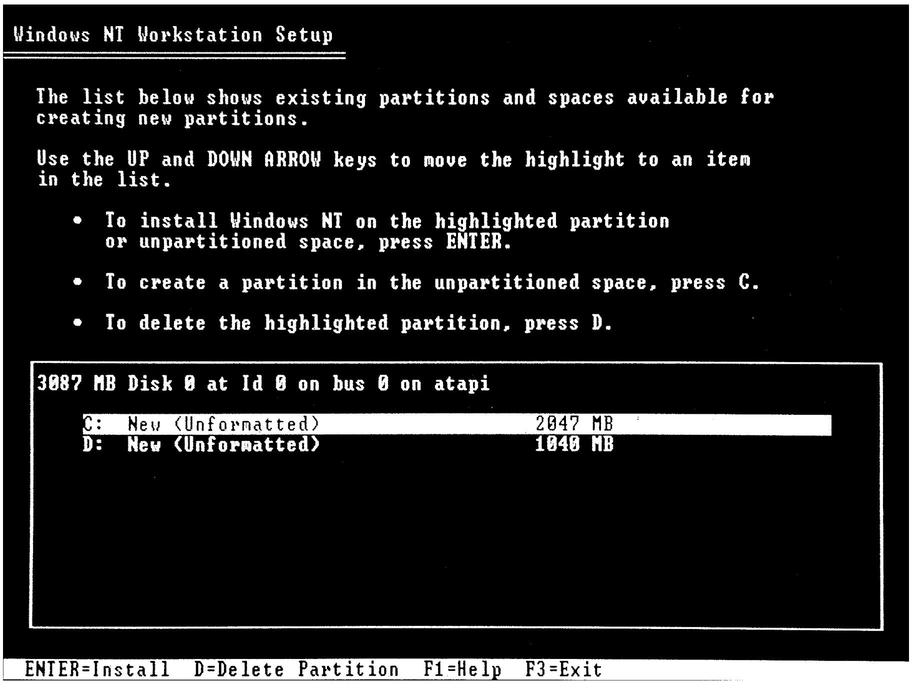


```
Windows NT Workstation Setup

  You have asked Setup to create a new partition on
  3087 MB Disk 0 at Id 0 on bus 0 on atapi.

     •  To create the new partition, enter a size below and
        press ENTER.

     •  To return to the previous screen without creating
        the partition, press ESC.

  The mimumum size for the new partition is     4 megabytes (MB).
  The maximum size for the new partition is  1040 megabytes (MB).
  Create partition of size (in MB):  1040

 ENTER=Create  ESC=Cancel
```

(9) Input the remaining capacity with the system partition size subtracted (varies depending on the capacity of hard disk drive) as the size of the partition to be created, and press <Enter> key.

The “D:” partition created here is used as an image space partition.

→ The screen for selecting partitions to install reappears. The newly created partition is specified as “D: New (Unformatted)...”.



```
Windows NT Workstation Setup
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  The list below shows existing partitions and spaces available for
  creating new partitions.

  Use the UP and DOWN ARROW keys to move the highlight to an item
  in the list.

      •  To install Windows NT on the highlighted partition
         or unpartitioned space, press ENTER.

      •  To create a partition in the unpartitioned space, press C.

      •  To delete the highlighted partition, press D.

 3087 MB Disk 0 at Id 0 on bus 0 on atapi

      C:  New (Unformatted)                    2047 MB
      D:  New (Unformatted)                    1040 MB

 ENTER=Install  D=Delete Partition  F1=Help  F3=Exit
```

◆ NOTE ◆

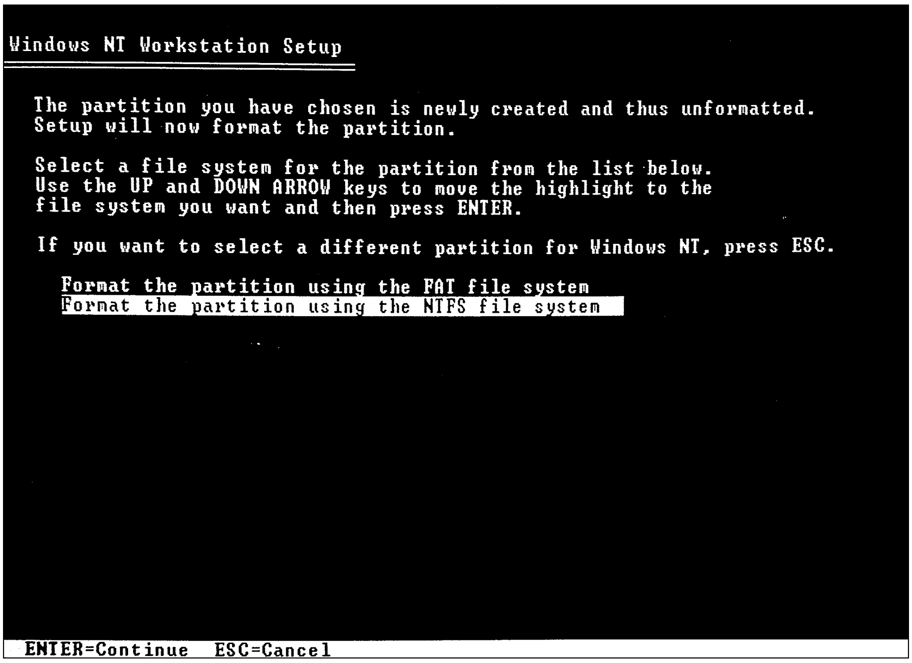
The illustration of the step (9) is an example for a 3.2 GB hard disk drive. For a hard disk drive of over 6.4 GB, partition size for “C:” is displayed as “2047 MB”, however, for “D:” partition, the values displayed differ according to the capacity of the hard disk drive.

(10) Move the cursor to the space “C: New (Unformatted) 2047 MB” where Windows NT is to be installed, then press <Enter> key.

◆ NOTE ◆

Never choose the “D:” partition in this step.

→ The screen for selecting a partition format appears.



```
Windows NT Workstation Setup
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  The partition you have chosen is newly created and thus unformatted.
  Setup will now format the partition.

  Select a file system for the partition from the list below.
  Use the UP and DOWN ARROW keys to move the highlight to the
  file system you want and then press ENTER.

  If you want to select a different partition for Windows NT, press ESC.

    Format the partition using the FAT file system
    Format the partition using the NTFS file system

 ENTER=Continue  ESC=Cancel
```
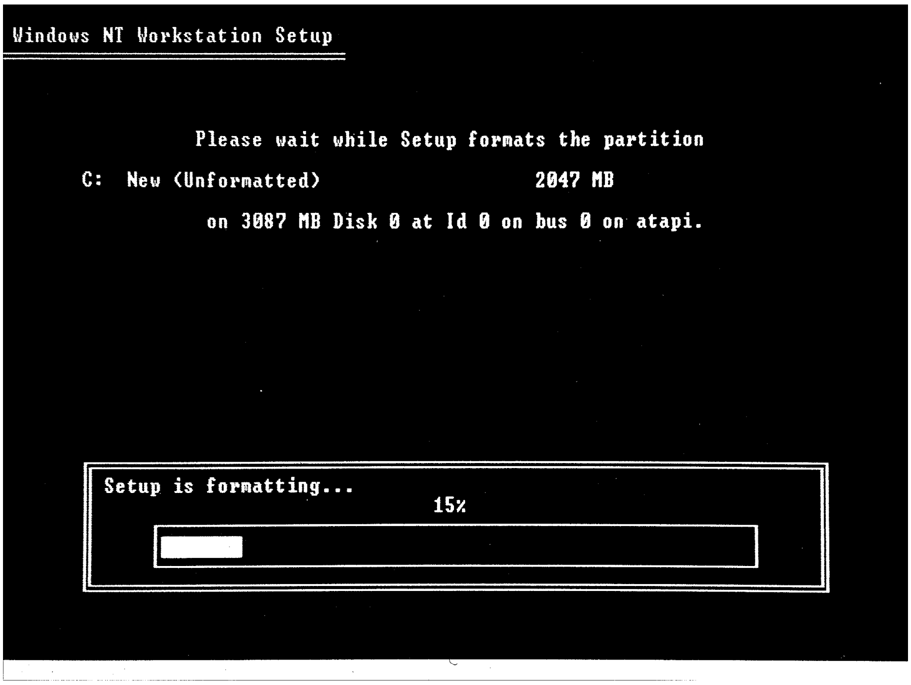

(11) Move the cursor to the “Format the partition using the NTFS file system” and press <Enter> key.

→ The formatting process starts.



```
Windows NT Workstation Setup
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               Please wait while Setup formats the partition

     C:  New (Unformatted)                    2047 MB

                on 3087 MB Disk 0 at Id 0 on bus 0 on atapi.

      Setup is formatting...
                                   15%
```
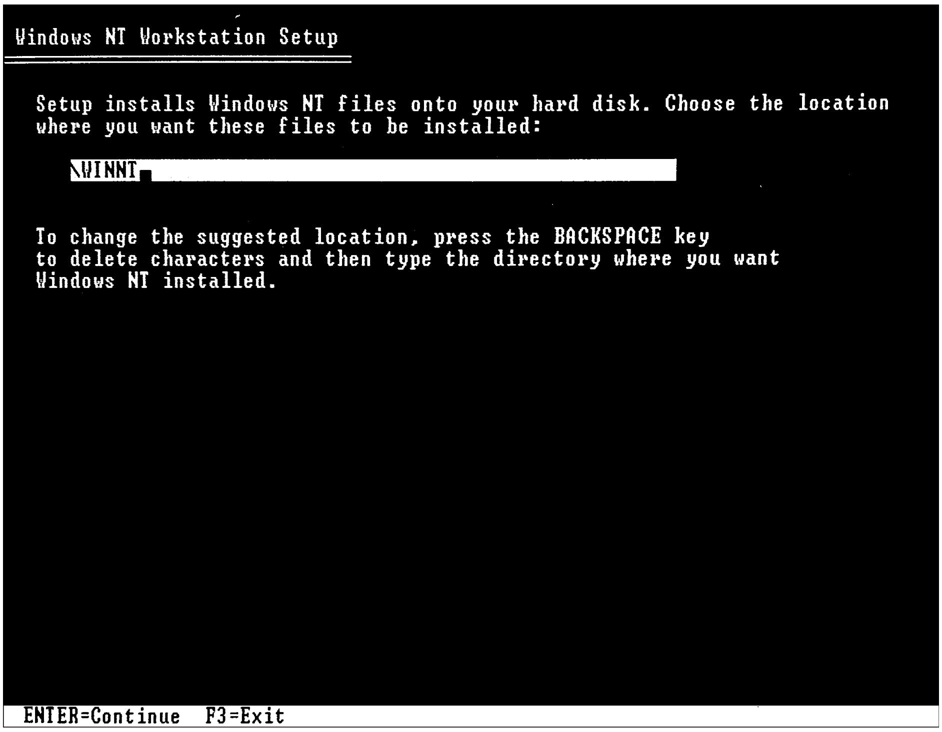
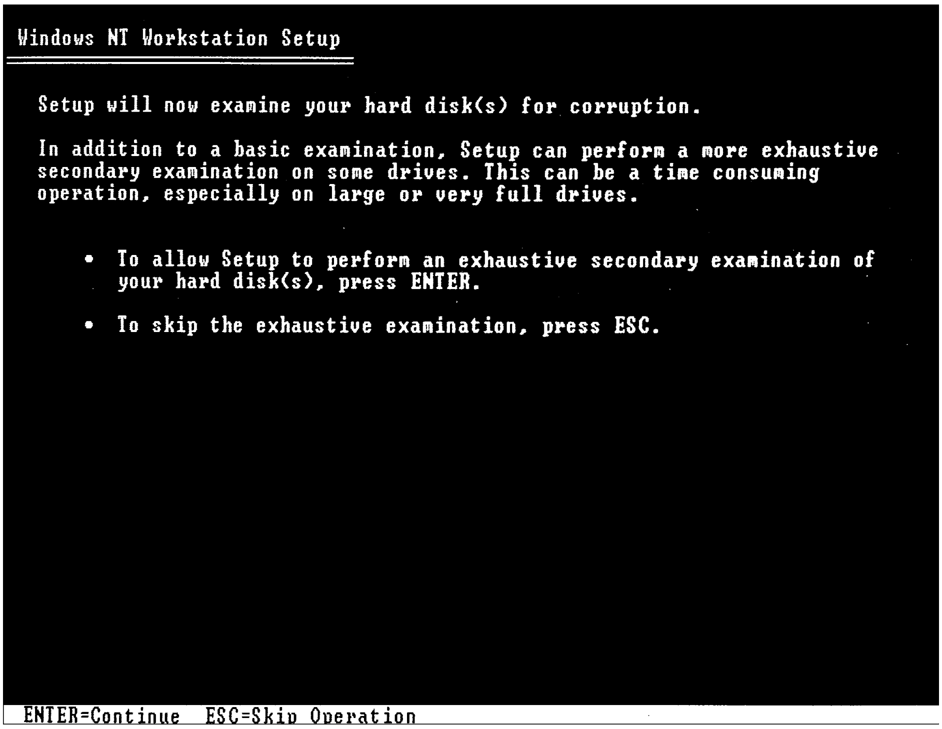

→ When the NTFS formatting has been successfully completed, the screen for selecting the location where Windows NT files are to be installed appears.



```
Windows NT Workstation Setup
════════════════════════════

  Setup installs Windows NT files onto your hard disk. Choose the location
  where you want these files to be installed:

     \WINNT

  To change the suggested location, press the BACKSPACE key
  to delete characters and then type the directory where you want
  Windows NT installed.

 ENTER=Continue  F3=Exit
```

(12) Ensure that Windows NT files will be installed to "\WINNT", then press <Enter> key.

→ The screen for selecting the type of hard disk examination appears.



```
Windows NT Workstation Setup
════════════════════════════

  Setup will now examine your hard disk(s) for corruption.

  In addition to a basic examination, Setup can perform a more exhaustive
  secondary examination on some drives. This can be a time consuming
  operation, especially on large or very full drives.

      •  To allow Setup to perform an exhaustive secondary examination of
         your hard disk(s), press ENTER.

      •  To skip the exhaustive examination, press ESC.

 ENTER=Continue  ESC=Skip Operation
```

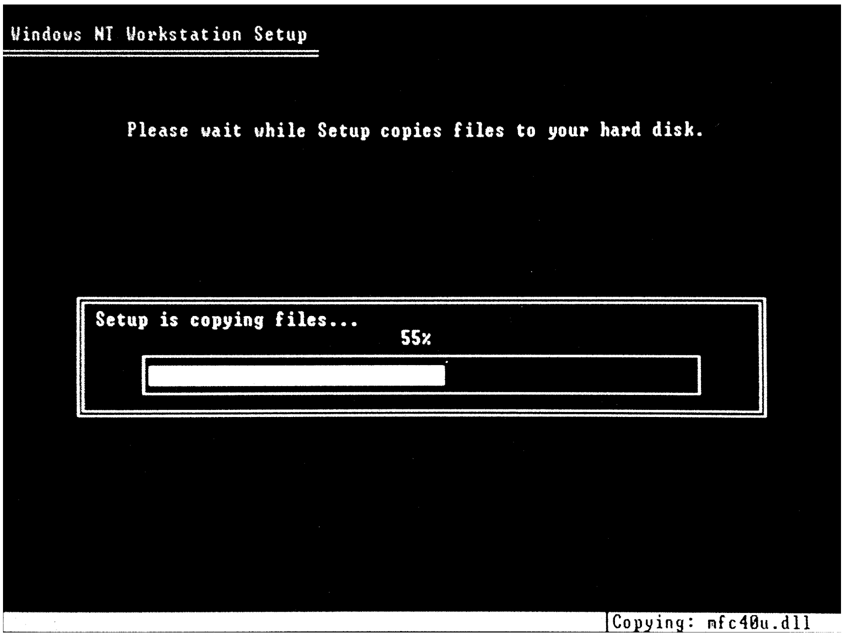
- Hard Disk Examination and File Copy

◆ NOTE ◆

The examination of the hard disk includes a basic examination and a more exhaustive secondary examination.

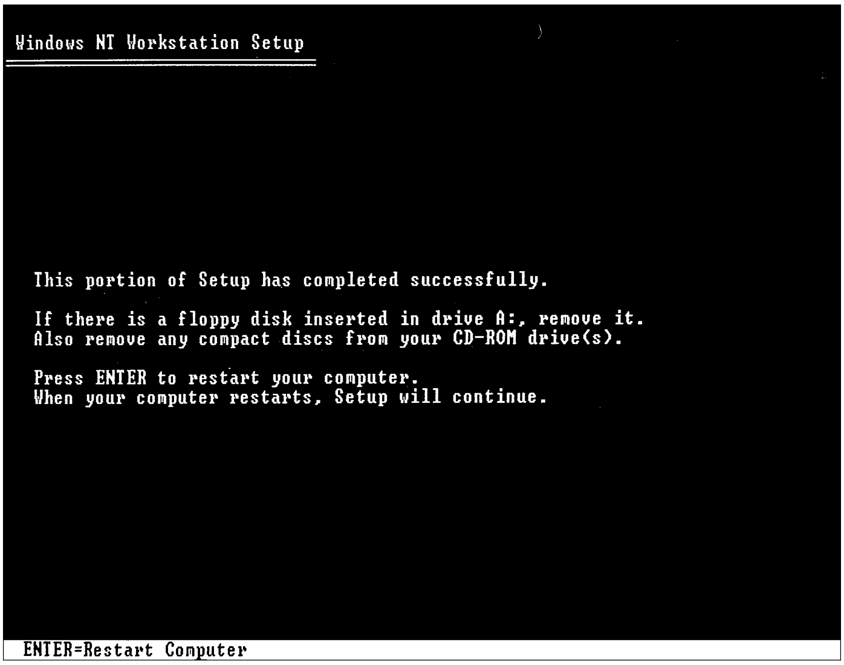
(1) Press <Enter> key to execute the secondary examination.

→ When the examination has been successfully completed, the compressed file in the CD-ROM is decompressed and copied to the hard disk.



```
Windows NT Workstation Setup

        Please wait while Setup copies files to your hard disk.

    Setup is copying files...
                         55%

                                                  Copying: mfc40u.dll
```

→ After the files are successfully copied to the hard disk, the screen appears indicating that the Windows NT Workstation Setup has successfully completed.



```
Windows NT Workstation Setup

  This portion of Setup has completed successfully.

  If there is a floppy disk inserted in drive A:, remove it.
  Also remove any compact discs from your CD-ROM drive(s).

  Press ENTER to restart your computer.
  When your computer restarts, Setup will continue.

ENTER=Restart Computer
```

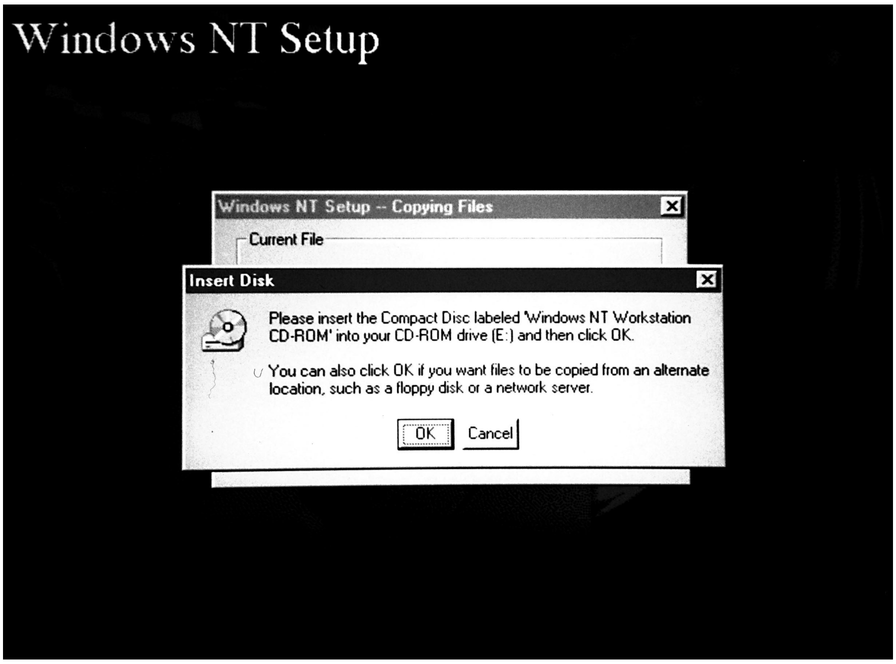
(2) Remove the CD-ROM and floppy disk from the respective drives and press <Enter> key.

→ The system restarts.

CAUTION

To prevent malfunction during restart and ensure that the system restarts successfully, always remove both the CD-ROM and floppy disk from their respective drives. In the event of failure of restart, reinstall Windows NT from scratch. It may be possible to restart (after removing the disks) by holding down <Ctrl>+<Alt>+<Delete> keys simultaneously. Try this step before beginning reinstallation.

→ When the system has successfully restarted, the [Insert Disk] message appears.



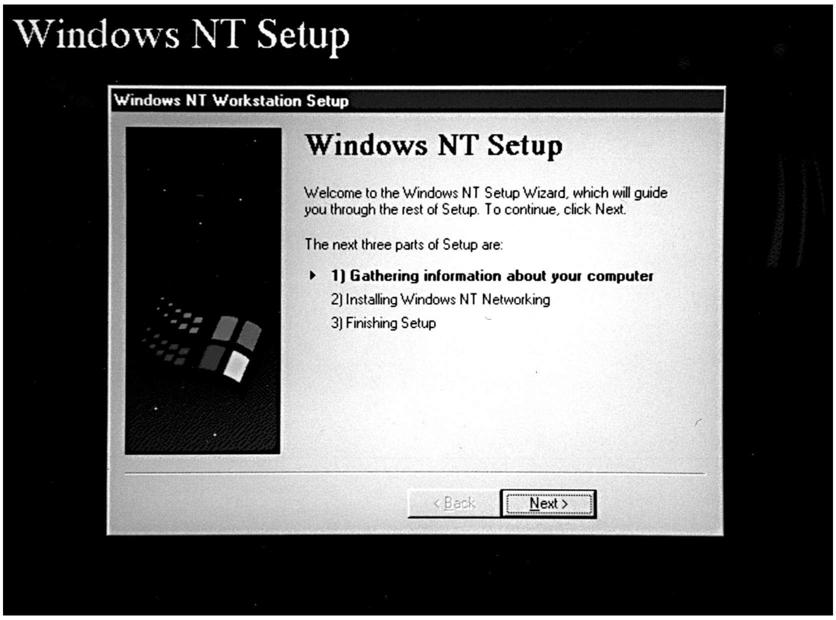
Please insert the Compact Disc labeled 'Windows NT Workstation CD-ROM' into your CD-ROM drive (E:) and then click OK.

You can also click OK if you want files to be copied from an alternate location, such as a floppy disk or a network server.

- Gathering Computer Information

(1) Insert the disk labeled “Windows NT Workstation For Distribution Only with a New PC” into the CD-ROM drive. Check that the CD-ROM drive access lamp goes on and out again, then click [OK].

→ The Setup Wizard starts up and the [Windows NT Setup] window appears.



Windows NT Setup

Welcome to the Windows NT Setup Wizard, which will guide you through the rest of Setup. To continue, click Next.

The next three parts of Setup are:

1) Gathering information about your computer
2) Installing Windows NT Networking
3) Finishing Setup

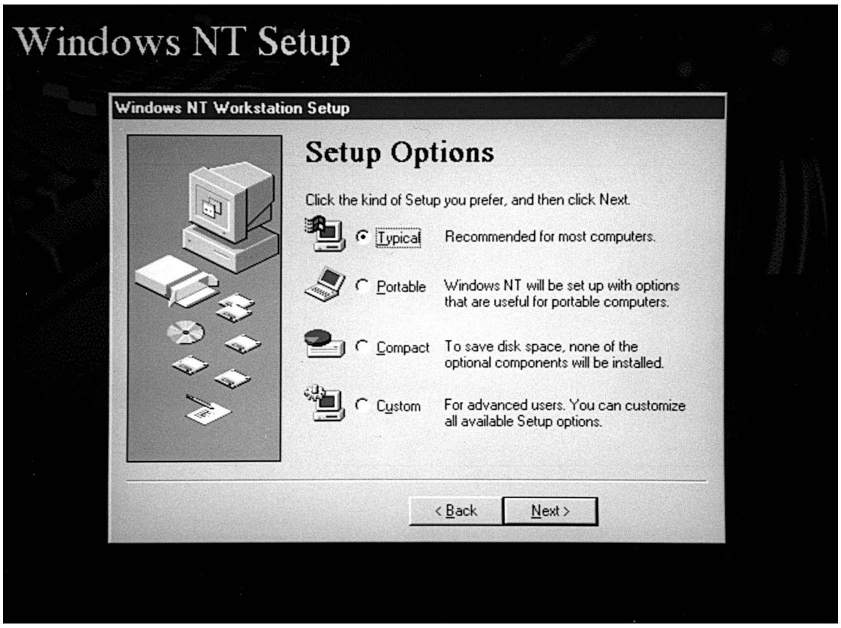
◆ **NOTE** ◆

All settings from this point are entered using the wizard, which operates in Windows NT. This means that field entry items and multiple-option choices can be selected using the mouse.

---

(2) Click [Next>].

→ The [Setup Options] window appears.



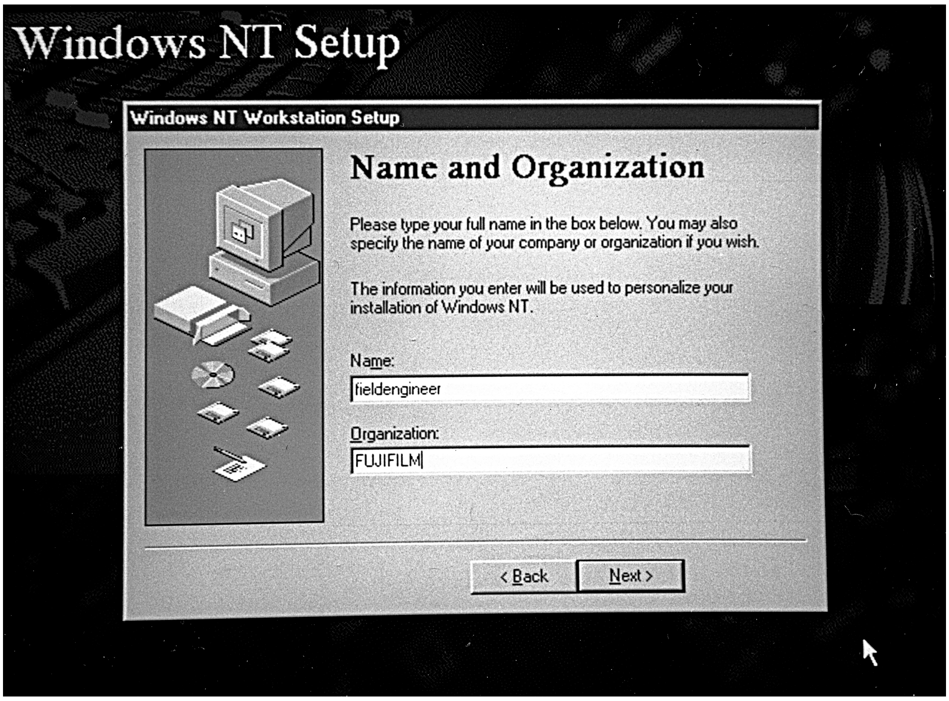
Setup Options

Click the kind of Setup you prefer, and then click Next.

● Typical	Recommended for most computers.
○ Portable	Windows NT will be set up with options that are useful for portable computers.
○ Compact	To save disk space, none of the optional components will be installed.
○ Custom	For advanced users. You can customize all available Setup options.

(3) Choose [Typical] and click [Next>].

→ The [Name and Organization] window appears.



Windows NT Setup

Windows NT Workstation Setup

Name and Organization

Please type your full name in the box below. You may also specify the name of your company or organization if you wish.

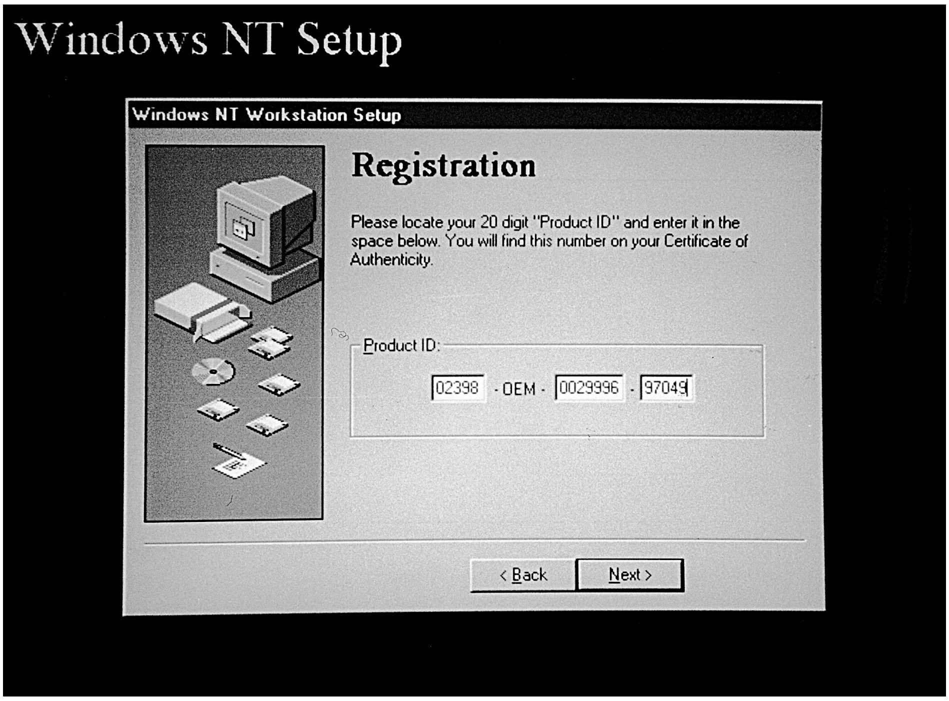
The information you enter will be used to personalize your installation of Windows NT.

Name: fieldengineer

Organization: FUJIFILM

(4) Type “`fieldengineer`” in the [Name:] field and “`FUJIFILM`” in the [Organization:] filed, then click [Next>].

→ The [Registration] window appears.



Windows NT Setup

Windows NT Workstation Setup

Registration

Please locate your 20 digit "Product ID" and enter it in the space below. You will find this number on your Certificate of Authenticity.

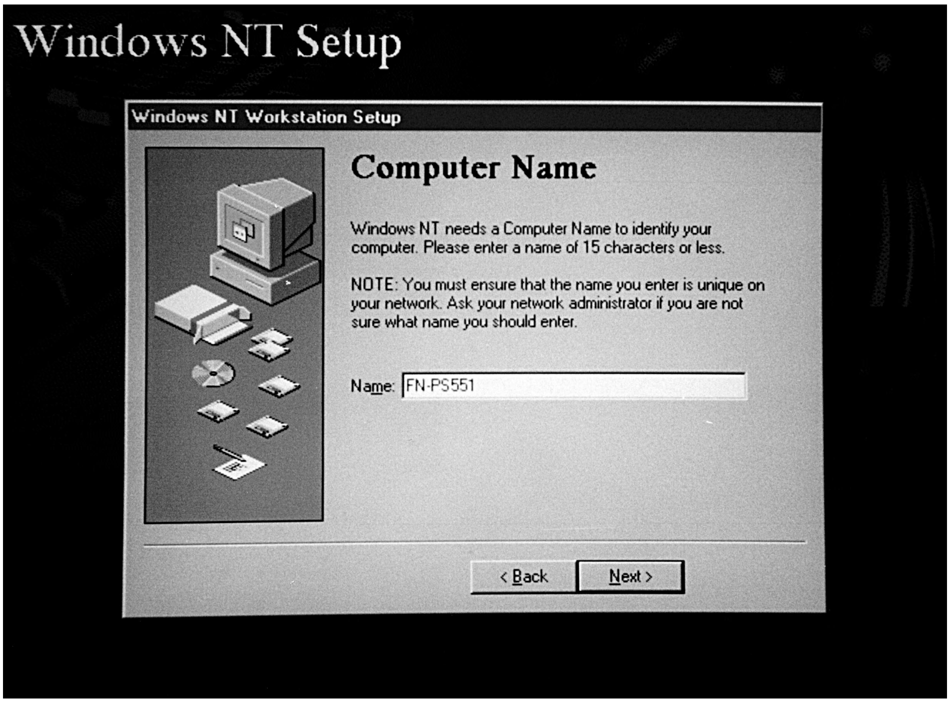
Product ID: 02398 - OEM - 0029996 - 97049

(5) Enter a product ID in the [Product ID:] field and click [Next>].

CAUTION

- The product ID is shown on the cover of the guide book “Windows NT Workstation For Distribution with a New PC only”.
- The product ID shown in step (4) is an example only. It is not a valid product ID.
- Press <Num Lock> key to enable the ten-key before entering numeric values.

→ The [Computer Name] window appears.



Computer Name

Windows NT needs a Computer Name to identify your computer. Please enter a name of 15 characters or less.

NOTE: You must ensure that the name you enter is unique on your network. Ask your network administrator if you are not sure what name you should enter.

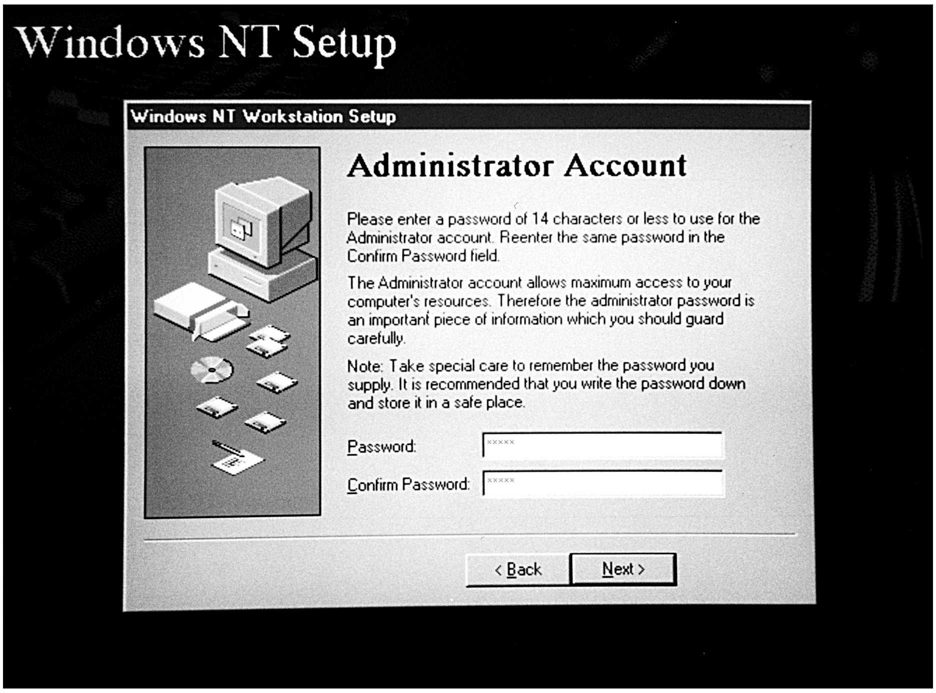
Name: FN-PS551

(6) Enter a computer name (host name, e.g., `FN-PS551`) in the [Name] field and click [Next>].

◆ NOTE ◆

- The computer name (host name) must be entered in single-byte alphanumeric characters.
- The computer name (host name) is displayed in upper case once entered in either lower case or upper case.
- For the FUJI protocol (FINP), the maximum length of computer name (host name) is limited to 10 characters. For other protocols, it is limited to 15 characters.
- The computer name (host name) must be a unique name within the installation site. If more than one FN-PS551 is used in the same installation site, each unit must be given a different name.

→ The [Administrator Account] window appears.



Administrator Account

Please enter a password of 14 characters or less to use for the Administrator account. Reenter the same password in the Confirm Password field.

The Administrator account allows maximum access to your computer's resources. Therefore the administrator password is an important piece of information which you should guard carefully.

Note: Take special care to remember the password you supply. It is recommended that you write the password down and store it in a safe place.

Password: xxxxx

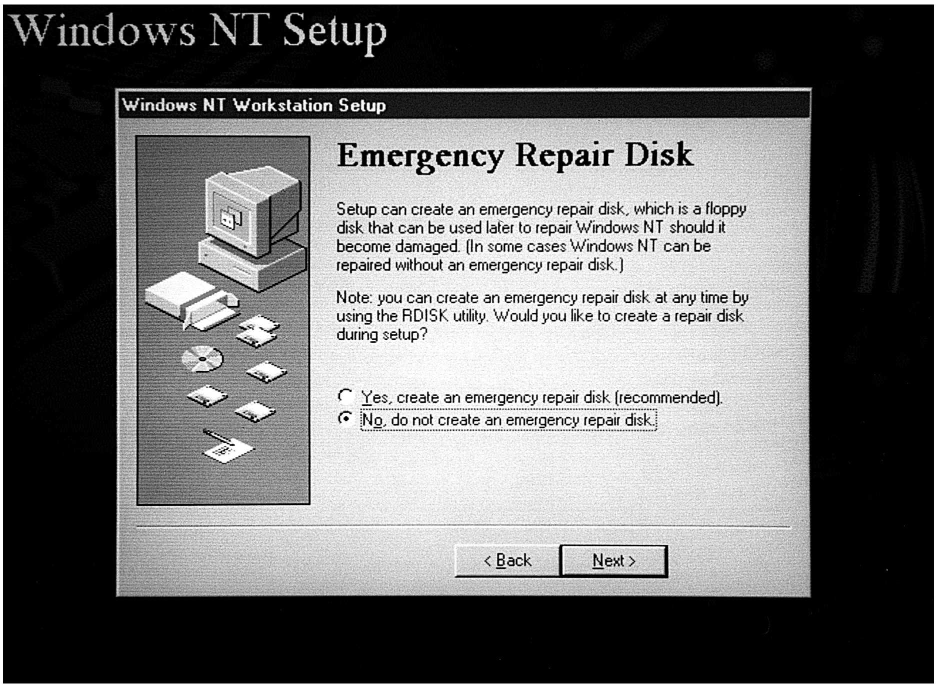
Confirm Password: xxxxx

(7) Type a password character string “pc-ps” in the [Password:] field in lower case. Retype the identical character string “pc-ps” in the [Confirm Password:] field, then click [Next>].

CAUTION

- Each password character is displayed as an asterisk “*” when entered.
- The password entered in the [Password:] field must be confirmed by entering the identical character string in the [Confirm Password:] field before proceeding to the next step.
- Keep this password in secret to prevent unauthorized use.

→ The [Emergency Repair Disk] window appears.



Windows NT Setup

Windows NT Workstation Setup

Emergency Repair Disk

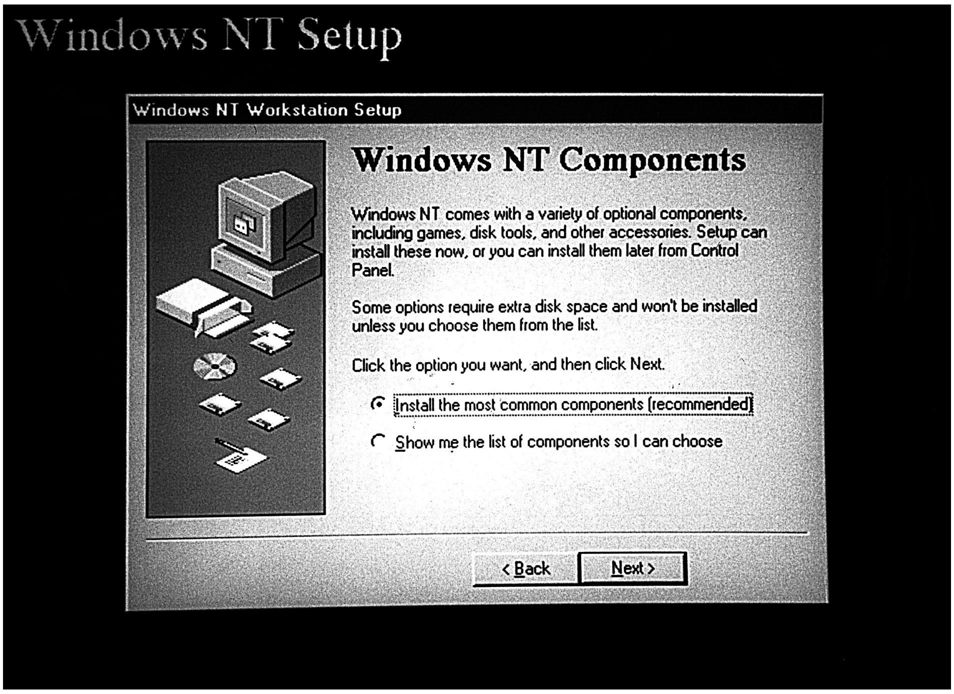
Setup can create an emergency repair disk, which is a floppy disk that can be used later to repair Windows NT should it become damaged. (In some cases Windows NT can be repaired without an emergency repair disk.)

Note: you can create an emergency repair disk at any time by using the RDISK utility. Would you like to create a repair disk during setup?

○ Yes, create an emergency repair disk (recommended).
● No, do not create an emergency repair disk.

(8) There is no need to create an emergency repair disk in this step. Choose [No, do not create an emergency repair disk] and click [Next>].

→ The [Window NT Components] window appears.



Windows NT Setup

Windows NT Workstation Setup

Windows NT Components

Windows NT comes with a variety of optional components, including games, disk tools, and other accessories. Setup can install these now, or you can install them later from Control Panel.

Some options require extra disk space and won't be installed unless you choose them from the list.

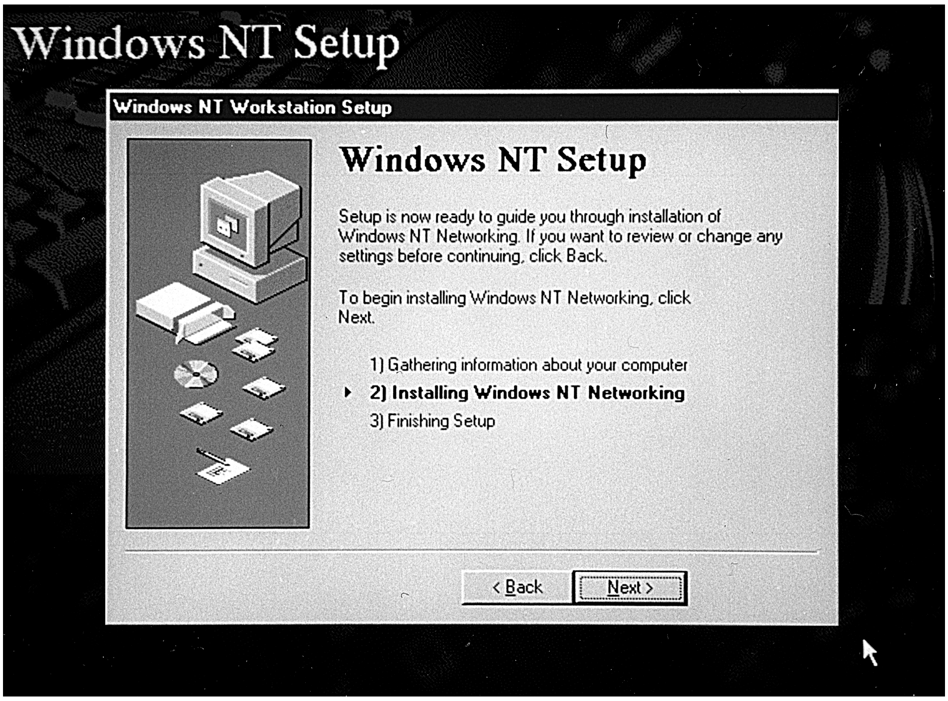
Click the option you want, and then click Next.

● Install the most common components (recommended)

○ Show me the list of components so I can choose

(9) Choose [Install the most common components (recommended)] and click [Next>].

→ The [Window NT Setup] window reappears.



Windows NT Setup

Windows NT Workstation Setup

Windows NT Setup

Setup is now ready to guide you through installation of Windows NT Networking. If you want to review or change any settings before continuing, click Back.

To begin installing Windows NT Networking, click Next.

1) Gathering information about your computer

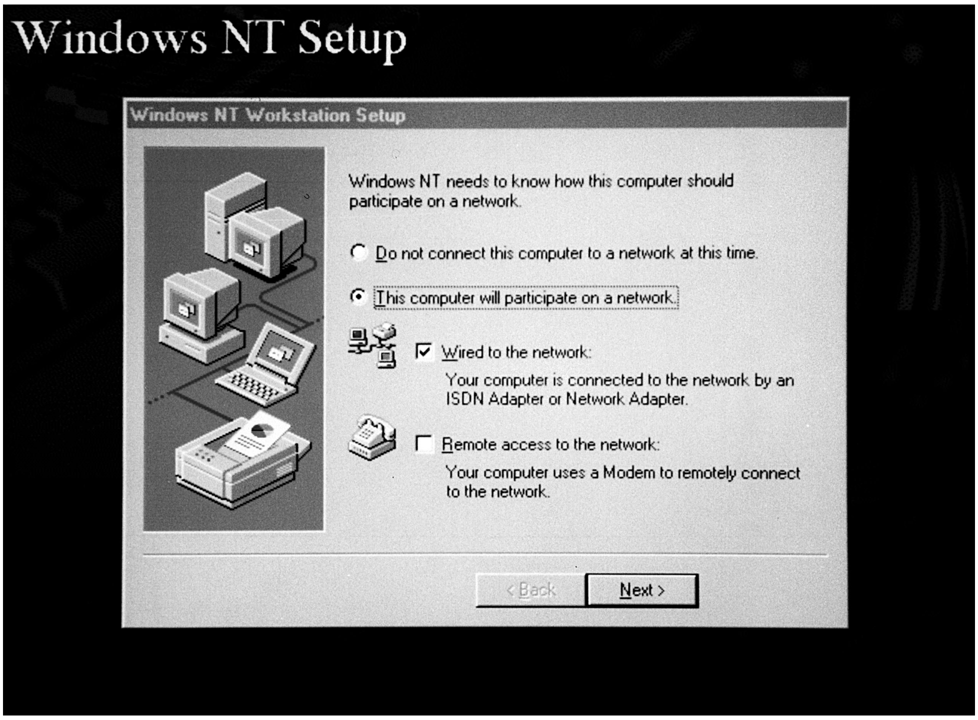
▸ **2) Installing Windows NT Networking**

3) Finishing Setup

- Installing the Windows NT Network

(1) Check that [Installing Windows NT Networking] is selected (displayed in bold type), then click [Next>].

→ The screen for selecting the networking method to participate on a network appears.



Windows NT Setup

Windows NT Workstation Setup

Windows NT needs to know how this computer should participate on a network.

○ Do not connect this computer to a network at this time.

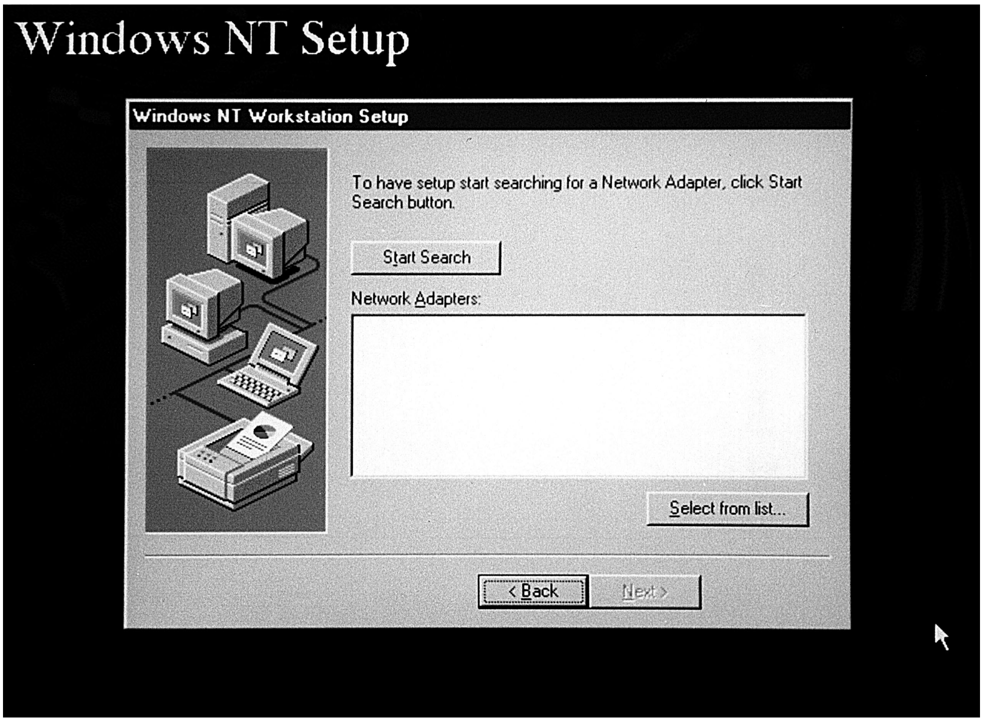
● This computer will participate on a network.

☑ Wired to the network:
Your computer is connected to the network by an ISDN Adapter or Network Adapter.

☐ Remote access to the network:
Your computer uses a Modem to remotely connect to the network.

(2) Check that [This computer will participate on a network.] is selected and that [Wired to the network:] is checked, then click [Next>].

→ The screen for searching for network adapters appears.



Windows NT Setup

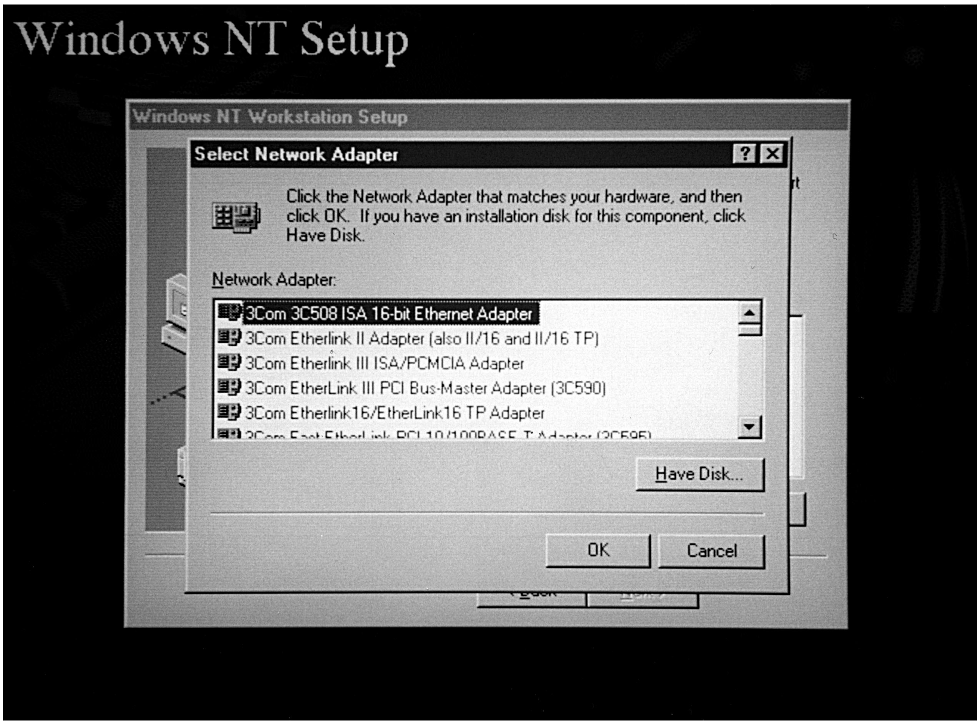
Windows NT Workstation Setup

To have setup start searching for a Network Adapter, click Start Search button.

Network Adapters:

(3) To search for the network adapter (or Ethernet board) inside the control unit (PC). Click [Select from list...].

→ The [Select Network Adapter] dialog appears.


Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
Have Disk...
OK
Cancel

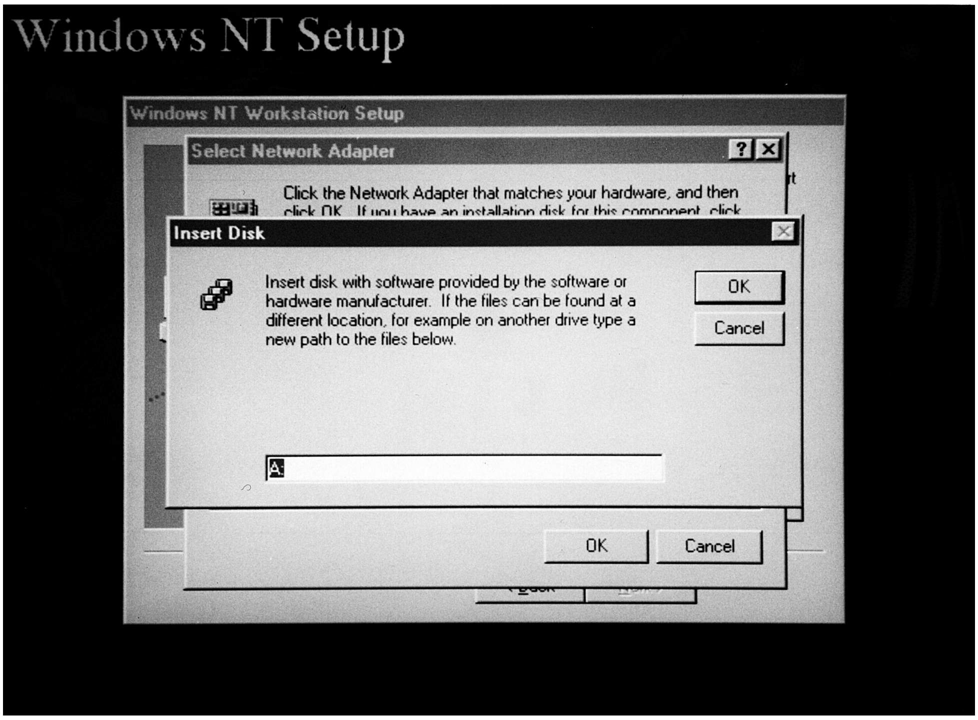
Click the Network Adapter that matches your hardware, and then click OK. If you have an installation disk for this component, click Have Disk.

Network Adapter:

- 3Com 3C508 ISA 16-bit Ethernet Adapter
- 3Com Etherlink II Adapter (also II/16 and II/16 TP)
- 3Com Etherlink III ISA/PCMCIA Adapter
- 3Com EtherLink III PCI Bus-Master Adapter (3C590)
- 3Com Etherlink16/EtherLink16 TP Adapter

(4) Click [Have Disk...] to install the network driver from the floppy disk.

→ The [Insert Disk] dialog appears.


Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
Insert Disk
OK
Cancel
OK
Cancel

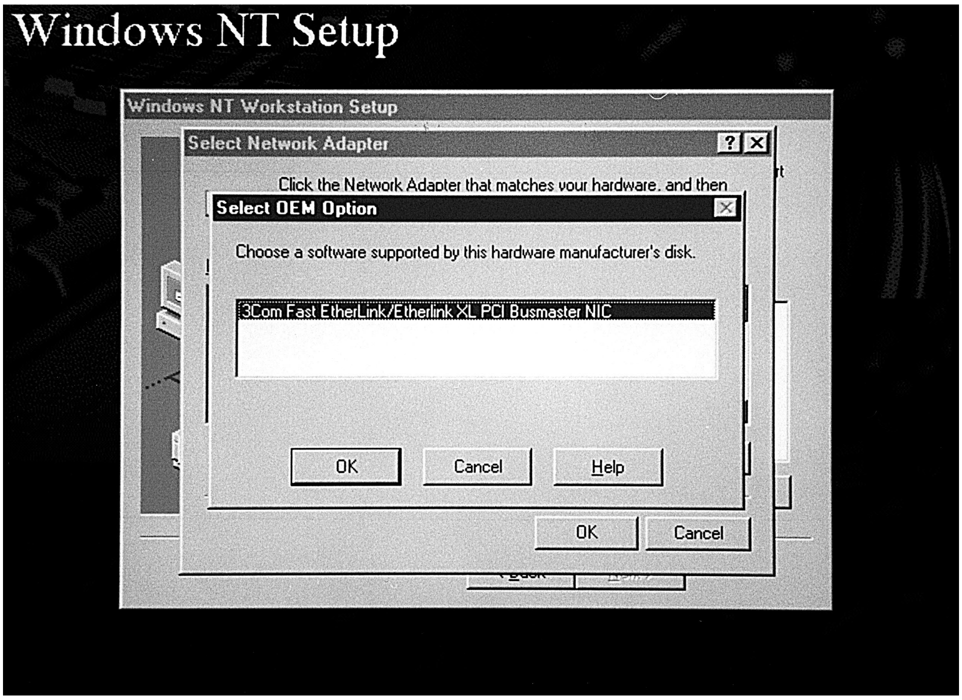
Click the Network Adapter that matches your hardware, and then

Insert disk with software provided by the software or hardware manufacturer. If the files can be found at a different location, for example on another drive type a new path to the files below.

A:

(5) Insert the network driver disk relevant to the control unit model into the floppy disk drive, and click [OK].
- For GX1 series:
  3COM 3C90X Fast EtherLink XL NIC Drivers
- For GX110 series:
  3COM EtherDisk 5.04 Disk 1

→ The “Select OEM Option” dialog appears.


Windows NT Setup
Windows NT Workstation Setup
Select Network Adapter
Select OEM Option
OK
Cancel
Help
OK
Cancel

Click the Network Adapter that matches your hardware, and then

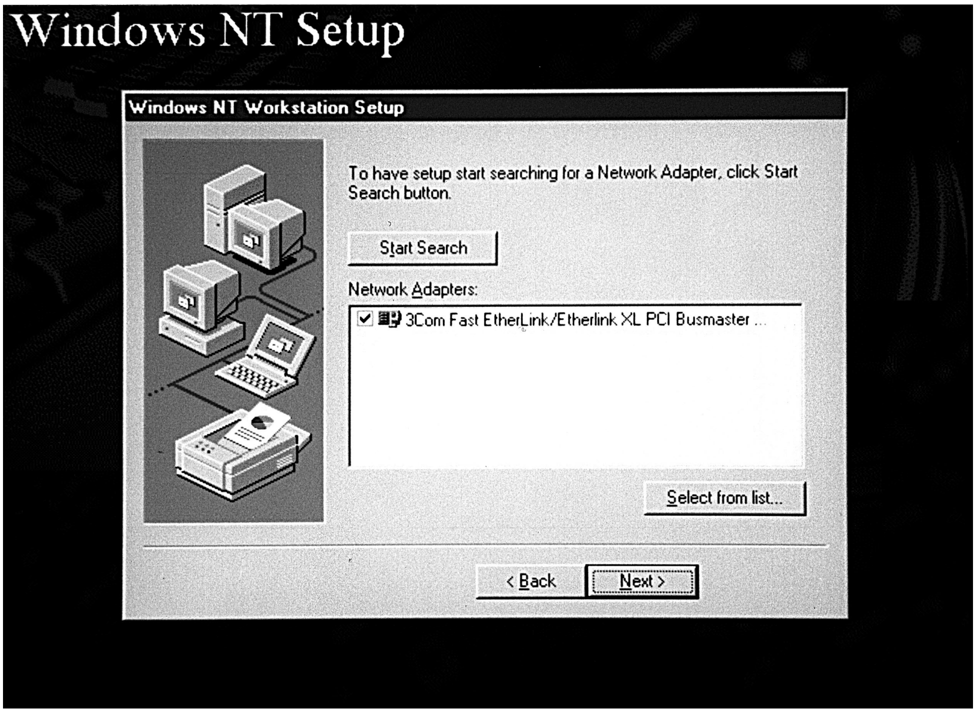
Choose a software supported by this hardware manufacturer's disk.

3Com Fast EtherLink/Etherlink XL PCI Busmaster NIC

(6) Check that the software relevant to the control unit model is displayed and selected in the dialog list, and click [OK].

- For GX1 series:
  3COM Fast EtherLink/Etherlink XL PCI Busmaster NIC
- For GX110 series:
  3COM EtherLink PCI NIC

→ The network adapter relevant to the control unit model is detected.



Windows NT Setup

Windows NT Workstation Setup

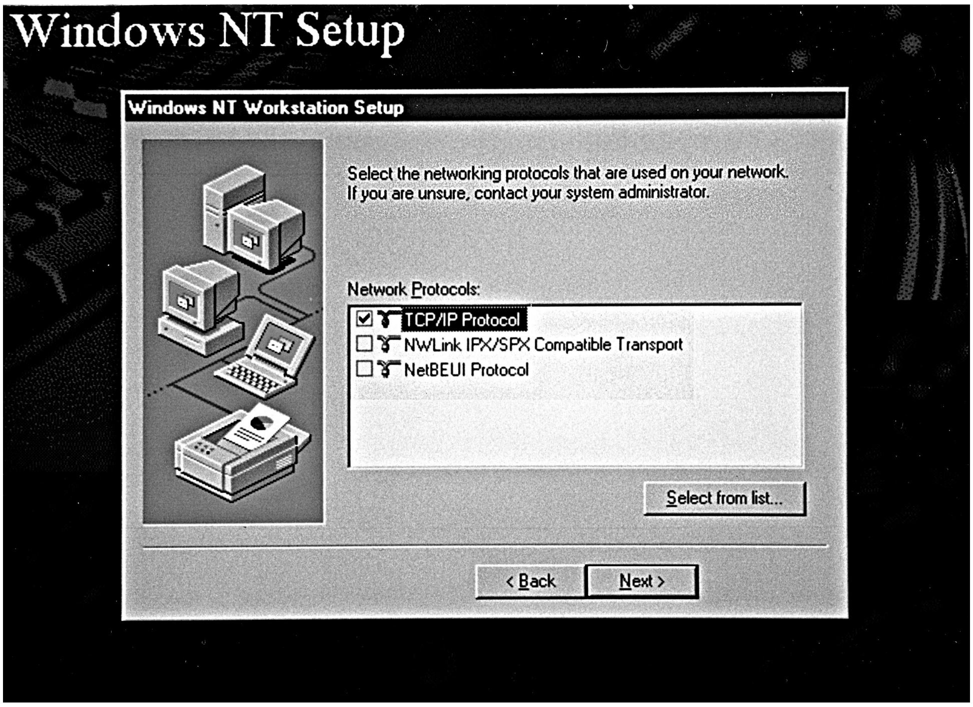
To have setup start searching for a Network Adapter, click Start Search button.

Network Adapters:

☑ 3Com Fast EtherLink/Etherlink XL PCI Busmaster ...

(7) Make sure that the network adapter detected is checked, then click [Next>].

→ The screen for selecting the network protocols to use on the network appears.



Windows NT Setup

Windows NT Workstation Setup

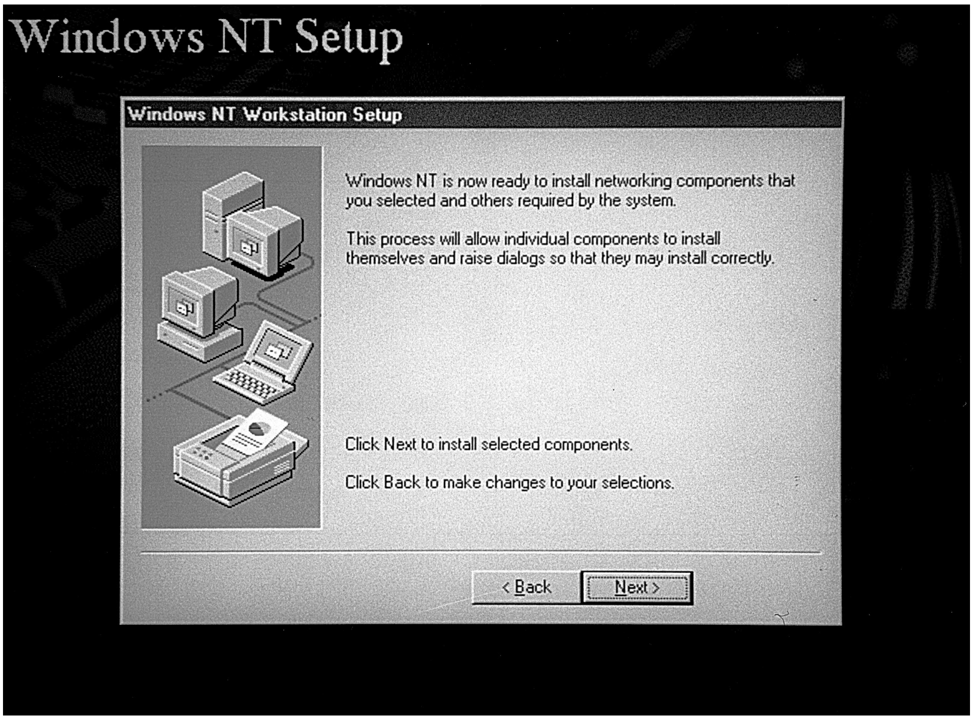
Select the networking protocols that are used on your network. If you are unsure, contact your system administrator.

Network Protocols:

☑ TCP/IP Protocol
☐ NWLink IPX/SPX Compatible Transport
☐ NetBEUI Protocol

(8) Make sure that the “TCP/IP protocol” is checked, then click [Next>].

→ The prompt screen for installing network components appears.



Windows NT Setup

Windows NT Workstation Setup

Windows NT is now ready to install networking components that you selected and others required by the system.

This process will allow individual components to install themselves and raise dialogs so that they may install correctly.

Click Next to install selected components.

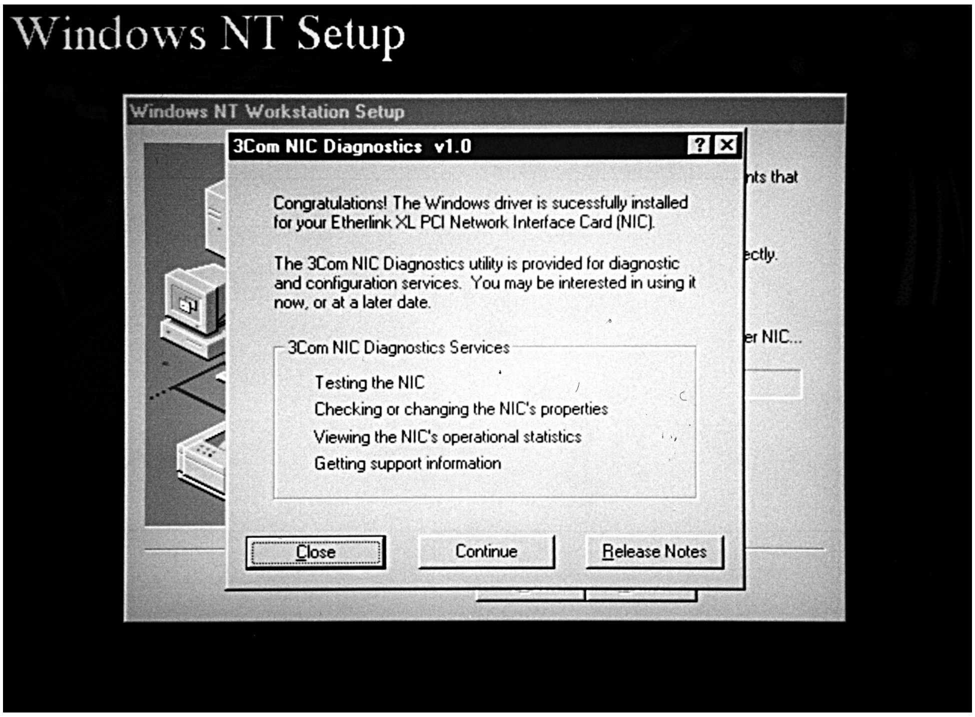
Click Back to make changes to your selections.

(9) Click [Next>].

→ The [3Com NIC Diagnostics v1.0] dialog appears.

◆ NOTE ◆

For a GX110 series control unit model, when [Set up Message] “Please insert the disk labeled ‘3Com EtherDisk for EtherLink PCI NICs (Diskette 2)’ into A:” is displayed, replace with “3COM EtherDisk 5.04 Disk 2” and click [OK]. Then, [TCP/IP Set up] alert in step (10) is displayed, so carry out the procedure from step (11).


Windows NT Setup
Windows NT Workstation Setup
3Com NIC Diagnostics v1.0

Congratulations! The Windows driver is sucessfully installed for your Etherlink XL PCI Network Interface Card (NIC).

The 3Com NIC Diagnostics utility is provided for diagnostic and configuration services. You may be interested in using it now, or at a later date.

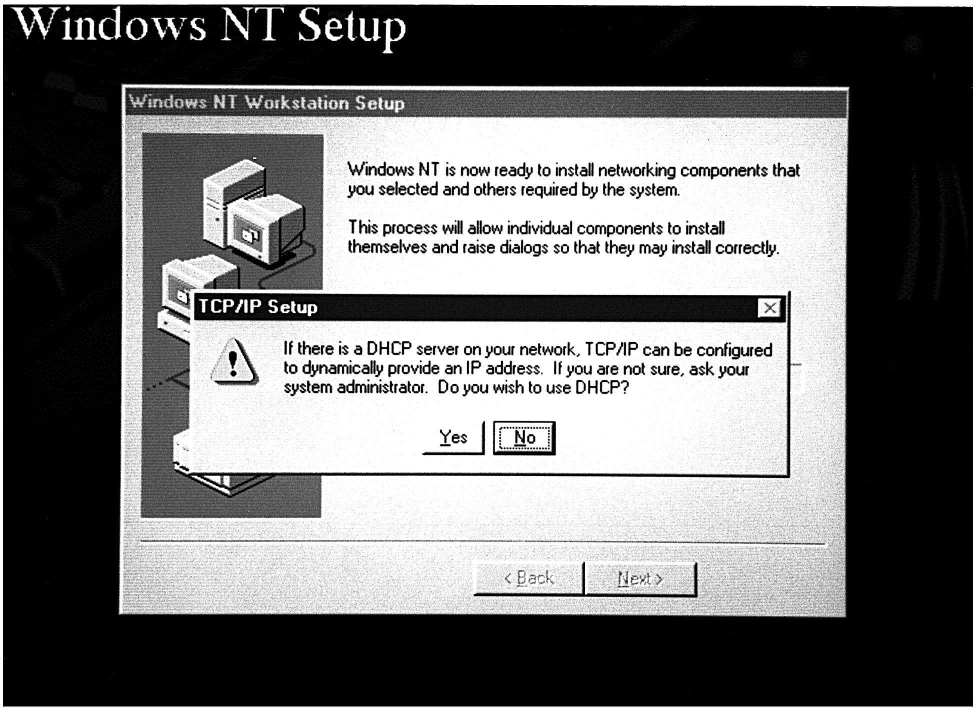
3Com NIC Diagnostics Services

- Testing the NIC
- Checking or changing the NIC's properties
- Viewing the NIC's operational statistics
- Getting support information

Close
Continue
Release Notes

(10) Click [Close].

→ The [TCP/IP Setup] alert appears prompting to choose a Yes or No for using a DHCP server.



Windows NT Setup

Windows NT Workstation Setup

Windows NT is now ready to install networking components that you selected and others required by the system.

This process will allow individual components to install themselves and raise dialogs so that they may install correctly.

TCP/IP Setup

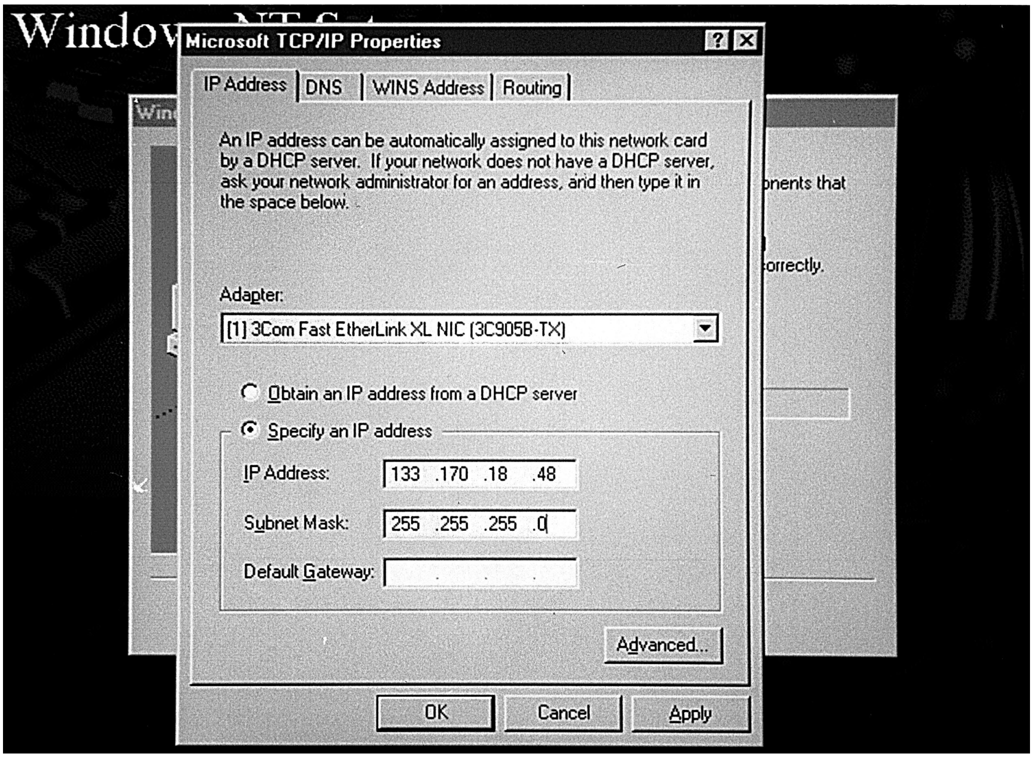
If there is a DHCP server on your network, TCP/IP can be configured to dynamically provide an IP address. If you are not sure, ask your system administrator. Do you wish to use DHCP?

(11) Click [No].

◆ NOTE ◆

Choosing [Yes] in this alert skips the setting of an IP address, and proceeds to step (13).
In this case, first of all, complete the Windows NT setup by performing step (13) onwards. Then, to specify an IP address, choose [Network] from the [Control Panel], and click the [Protocols] tab to open [Properties].

→ The [Microsoft TCP/IP Properties] window appears.



An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.

Adapter: [1] 3Com Fast EtherLink XL NIC (3C905B-TX)

○ Obtain an IP address from a DHCP server

● Specify an IP address

IP Address: 133 .170 .18 .48

Subnet Mask: 255 .255 .255 .0

Default Gateway: . . .

◆ NOTE ◆

Adapter name displayed in [Adapter:] list of [IP Address] window varies depending on the control unit model.

- For GX1 series:
  3Com Fast EtherLink XL NIC (3C905B-TX)
- For GX110 series:
  3Com EtherLink 10/100 PCI NIC (3C905C-TX)

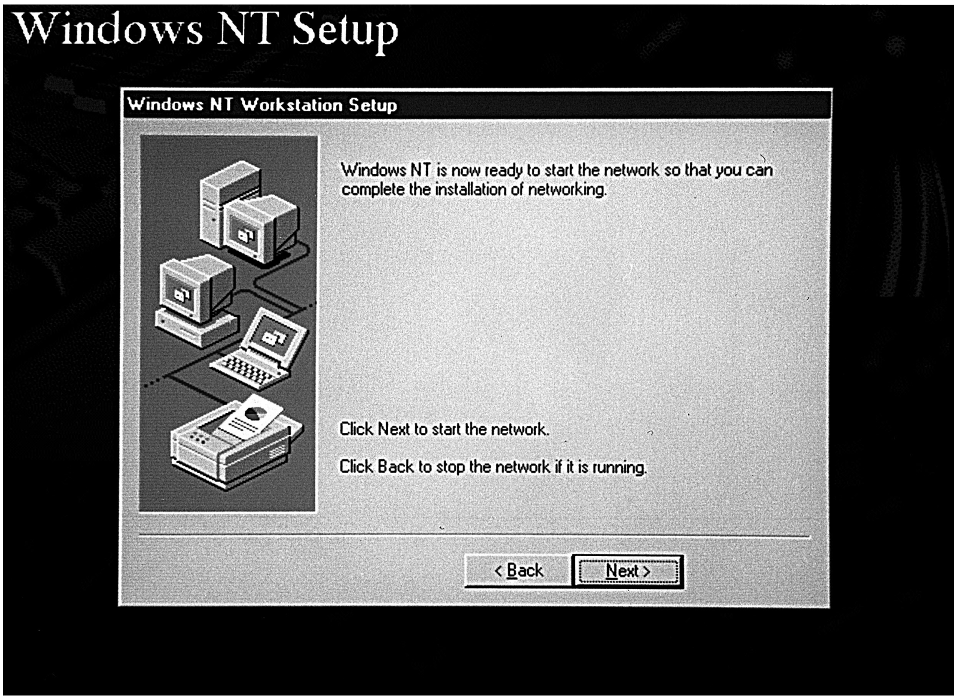
(12) Check that the [Specify an IP address] button on the [IP Address] window is selected. Enter the following information in the [IP Address:], [Subnet Mask:], and [Default Gateway:], then click [OK].

- Enter an IP address for this FN-PS551 in the [IP Address].
- If the network is using a subnet, enter mask data in the [Subnet Mask:]. If the network is not using a subnet, enter the Class C mask data (255.255.255.0).
- For [Default Gateway:], before receiving image data from clients (modalities) connecting to different networks, enter an IP address for the router (gateway) to which this FN-PS551 is connected.

◆ NOTE ◆

- Confirm details such as IP addresses, subnet masks, and routers with the network administrator of the installation site.
- The setting process cannot be ended until a subnet mask has been entered.
- The [Default Gateway:] need not be entered unless image data is received from different networks.

→ The prompt screen for starting up a network appears.



Windows NT Setup

Windows NT Workstation Setup

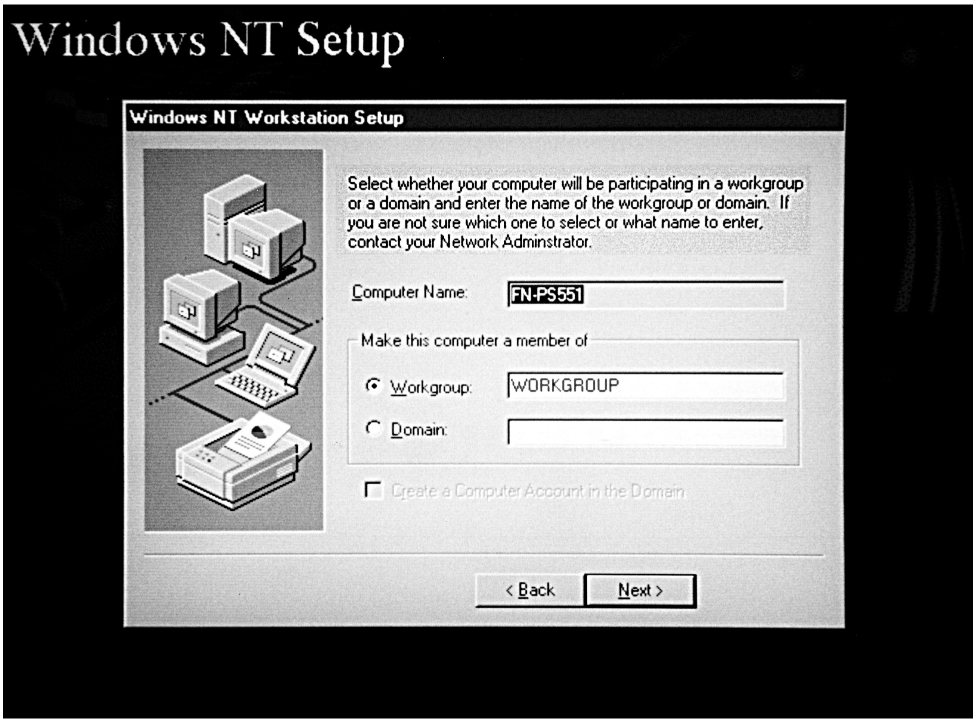
Windows NT is now ready to start the network so that you can complete the installation of networking.

Click Next to start the network.

Click Back to stop the network if it is running.

(13) Click [Next>].

→ The screen for entering a computer name and workgroup appears.



Windows NT Setup

Windows NT Workstation Setup

Select whether your computer will be participating in a workgroup or a domain and enter the name of the workgroup or domain. If you are not sure which one to select or what name to enter, contact your Network Adminstrator.

Computer Name: FN-PS551

Make this computer a member of

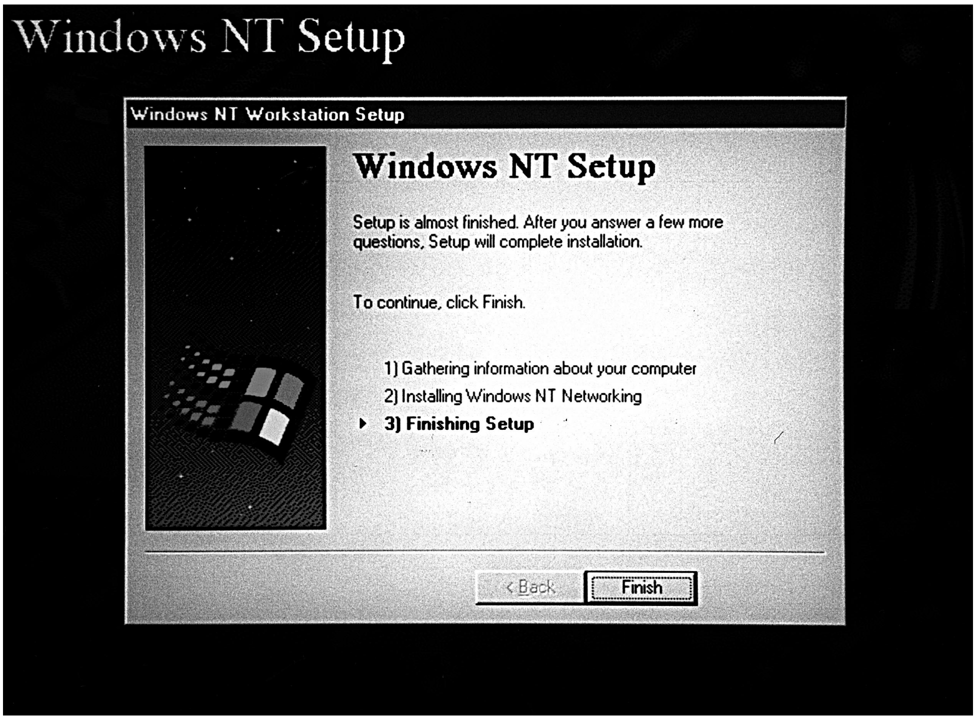
● Workgroup: WORKGROUP

○ Domain:

☐ Create a Computer Account in the Domain

(14) Click [Next>] to avoid any modification to the settings.

→ The screen for finishing the [Windows NT Setup] wizard appears.



Windows NT Setup

Windows NT Workstation Setup

Windows NT Setup

Setup is almost finished. After you answer a few more questions, Setup will complete installation.

To continue, click Finish.

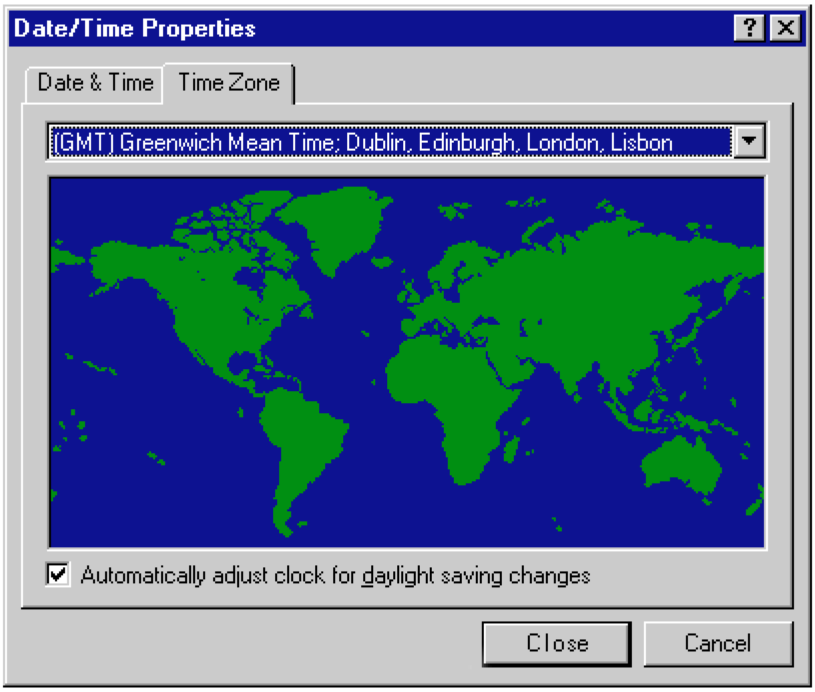
1) Gathering information about your computer

2) Installing Windows NT Networking

▸ **3) Finishing Setup**

(15) Click [Finish].

→ The [Date/Time Properties] window appears.



Date/Time Properties
?
Date & Time
Time Zone
Close
Cancel

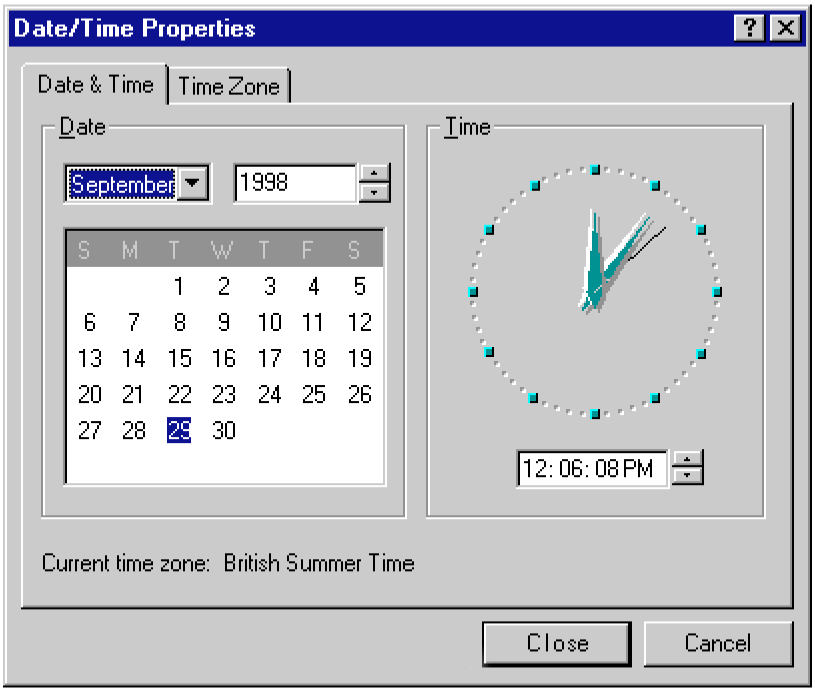
(GMT) Greenwich Mean Time; Dublin, Edinburgh, London, Lisbon

☑ Automatically adjust clock for daylight saving changes

- Checking the Date, Time, and Time Zone

(1) Click on the [Time Zone] tab and select the time zone from the dropdown list depending on the installation location, then click the [Date & Time] tab.

→ The current date and time are displayed.


Date/Time Properties
Date & Time
Time Zone
Date
Time
Close
Cancel

September 1998

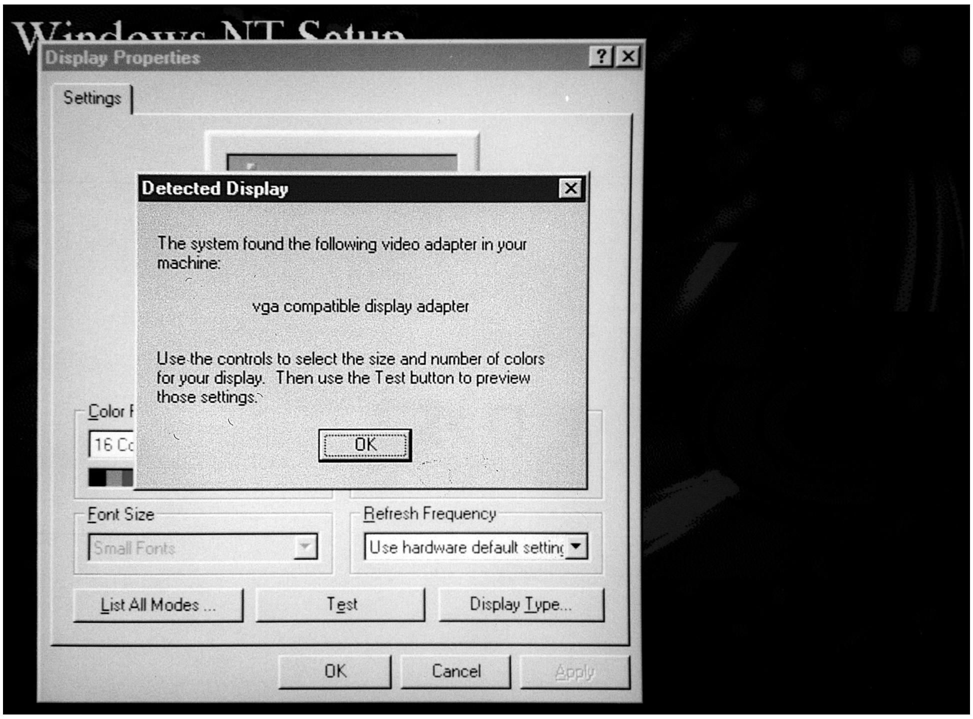
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

12:06:08 PM

Current time zone: British Summer Time

(2) Check that the date and time settings are correct, then click [Close]. Readjust the settings if necessary.

→ The [Detected Display] message appears to confirm the video adapter.


Windows NT Setup
Display Properties
Settings
Detected Display
Color P
16 Co
Font Size
Small Fonts
Refresh Frequency
Use hardware default setting
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

The system found the following video adapter in your machine:

vga compatible display adapter

Use the controls to select the size and number of colors for your display. Then use the Test button to preview those settings.

OK

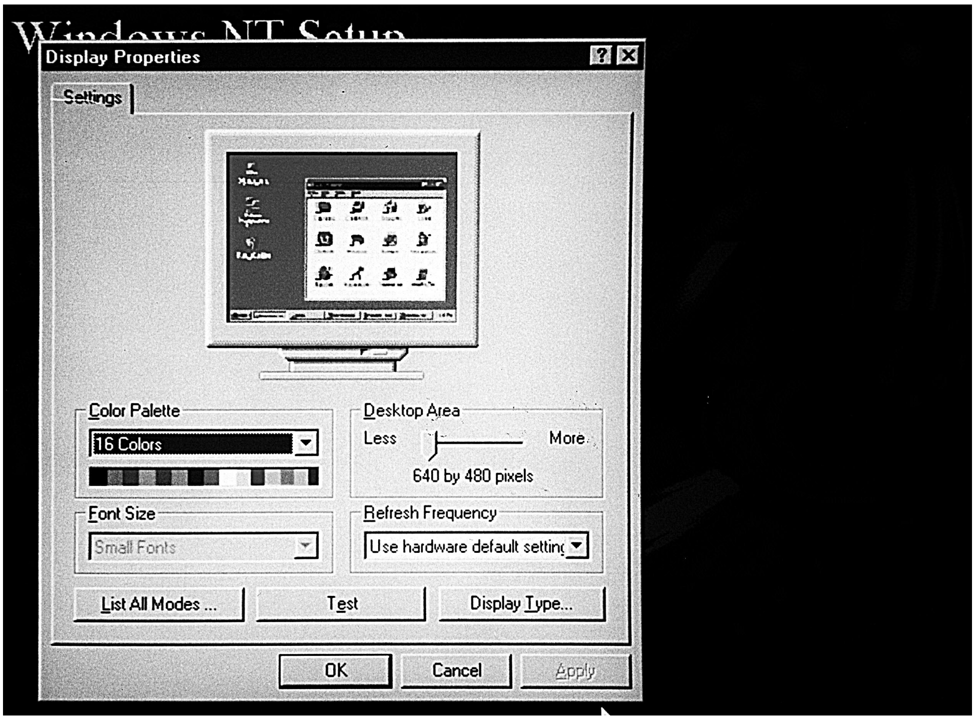
- Setting the Display Adapter

◆ NOTE ◆

A video driver should be installed separately. Skip the step to specify a video driver in this procedure.

(1) Check that the video adapter automatically detected is [vga compatible display adapter], then click [OK].

→ The [Display Properties] window appears.


Windows NT Setup
Display Properties
Settings
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

Color Palette: 16 Colors

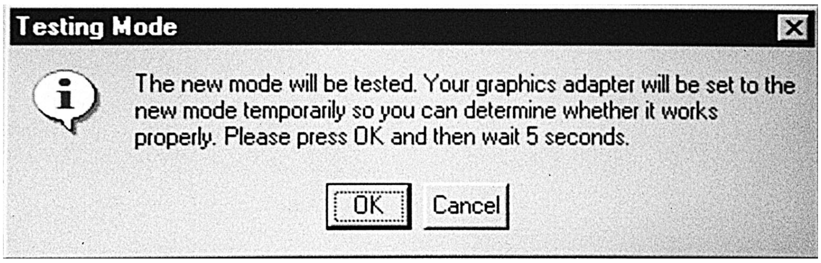
Desktop Area: Less – More, 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: Use hardware default settinc

(2) Click [Test].

→ The [Testing Mode] information appears.


Testing Mode
OK
Cancel

The new mode will be tested. Your graphics adapter will be set to the new mode temporarily so you can determine whether it works properly. Please press OK and then wait 5 seconds.

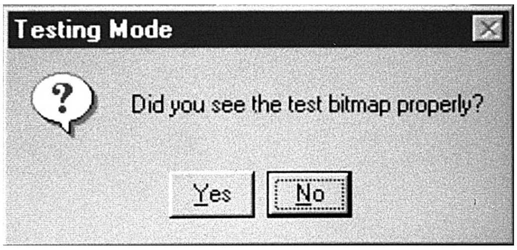
(3) Click [OK].

→ The test bit map is displayed for five seconds.

Red	Red Gradient
Green	Green Gradient
Blue	Blue Gradient
Yellow	Thin horizontal lines
Magenta	Thin vertical lines
Cyan	Gray Gradient

FP4F0112.EPS

→ The following message appears prompting to choose a Yes or No for correct display of test bit map.

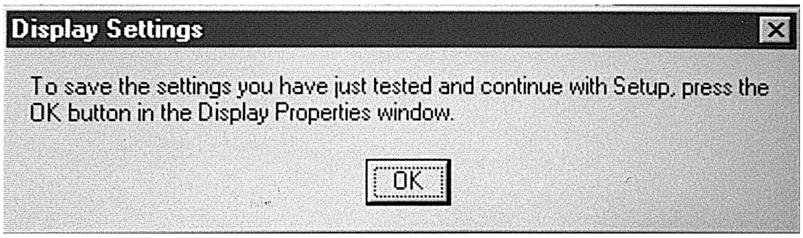


Testing Mode

Did you see the test bitmap properly?

(4) If it is correct, click [Yes].

→ The [Display Settings] message appears.

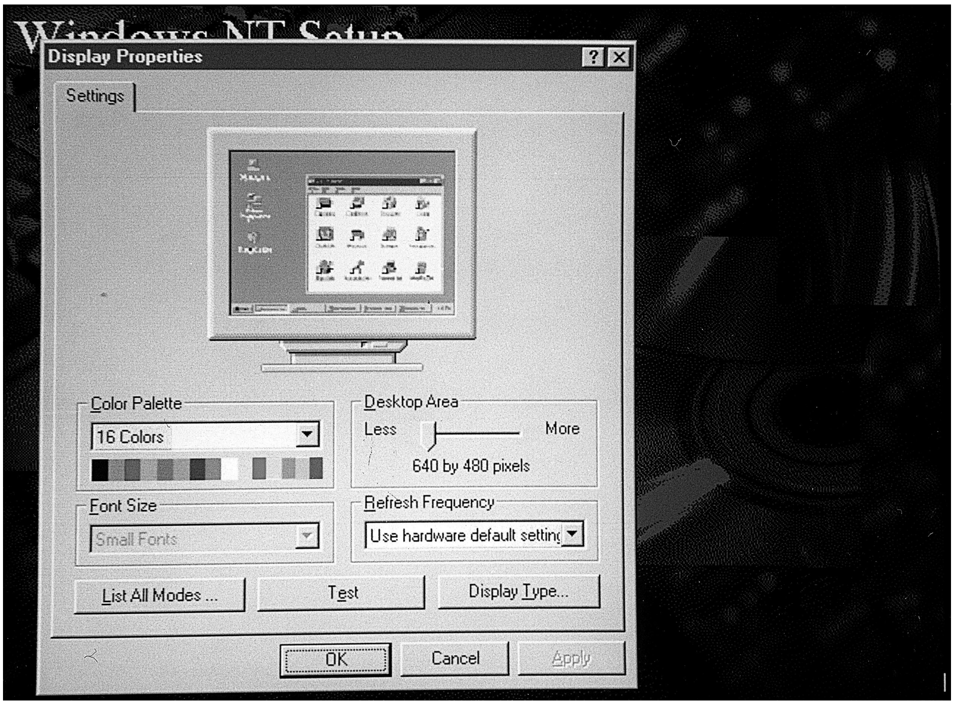


Display Settings

To save the settings you have just tested and continue with Setup, press the OK button in the Display Properties window.

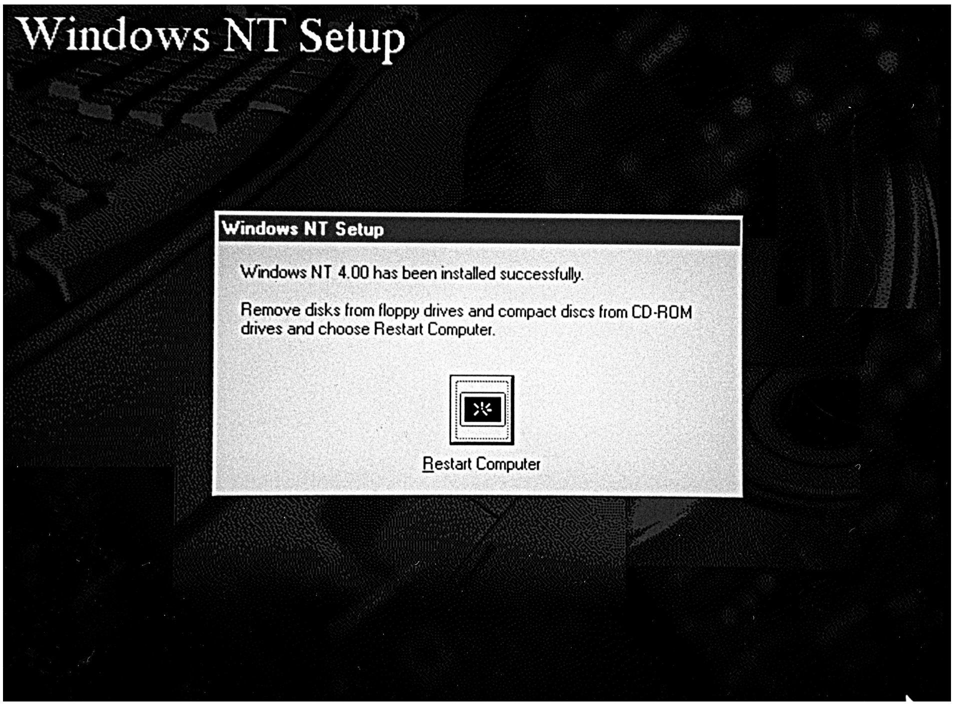
(5) Click [OK].

→ The display settings are saved.


Windows NT Setup
Display Properties
Settings
Color Palette
16 Colors
Desktop Area
Less
More
640 by 480 pixels
Font Size
Small Fonts
Refresh Frequency
Use hardware default settinç
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(6) On the [Display Properties] window, click [OK].

→ After compressed files are copied from the CD-ROM to the hard disk, the following message appears indicating that the Windows NT setup has been successfully completed.


Windows NT Setup

Windows NT 4.00 has been installed successfully.

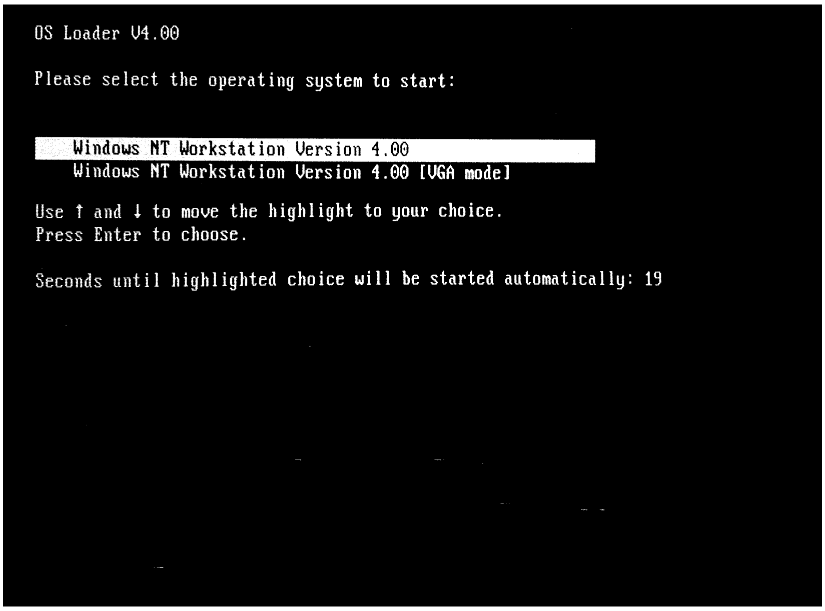
Remove disks from floppy drives and compact discs from CD-ROM drives and choose Restart Computer.

Windows NT Setup
Restart Computer

- Restarting the Computer

(1) Remove the floppy disk and CD-ROM from the respective drives and click [Restart Computer].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



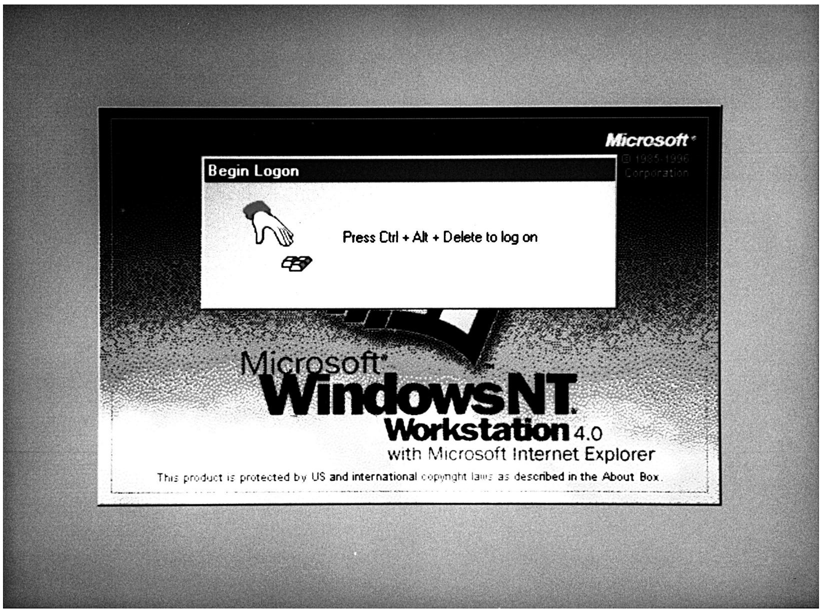
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(2) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



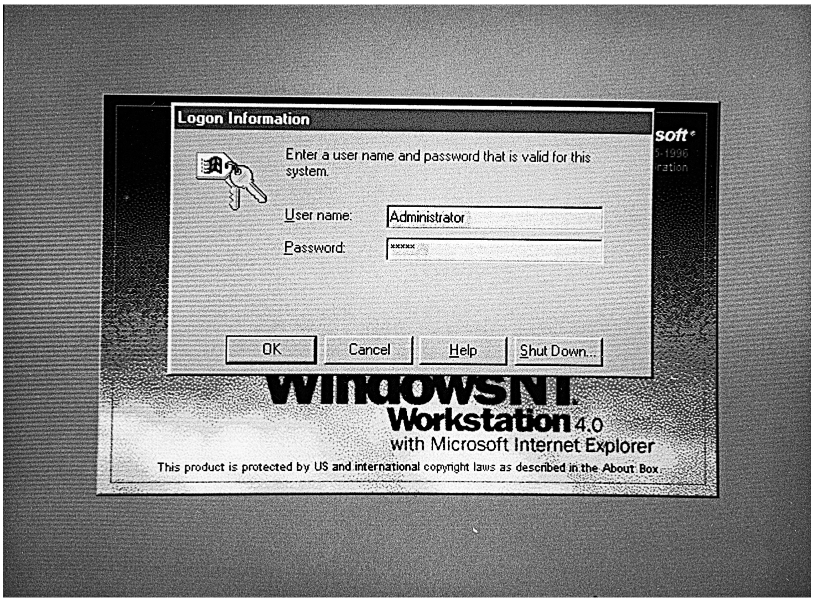
Press Ctrl + Alt + Delete to log on

Microsoft WindowsNT Workstation 4.0 with Microsoft Internet Explorer

This product is protected by US and international copyright laws as described in the About Box.

(3) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

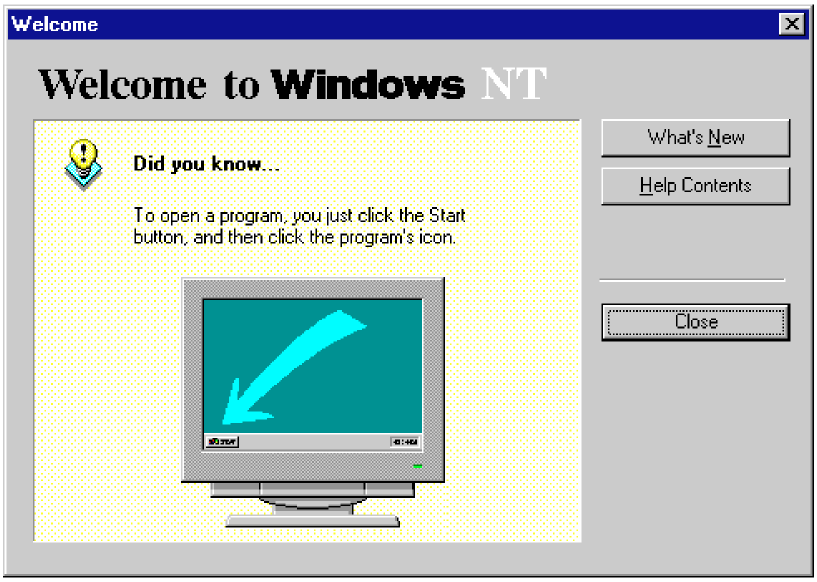
OK
Cancel
Help
Shut Down...
soft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box

(4) Type “`pc-ps`” in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the [Welcome to Windows NT] message appears.



Welcome

Welcome to Windows NT

Did you know...

To open a program, you just click the Start button, and then click the program's icon.

What's New
Help Contents
Close

(5) Click [Close].

This completes the Windows NT installation process.

8.2 Installing the Bus Mastering Drivers

◆ NOTE ◆

For a DELL OptiPlex GX110 series control unit model, the procedure shown in this section is not necessary. After installing Windows NT, install Windows NT Service Pack.

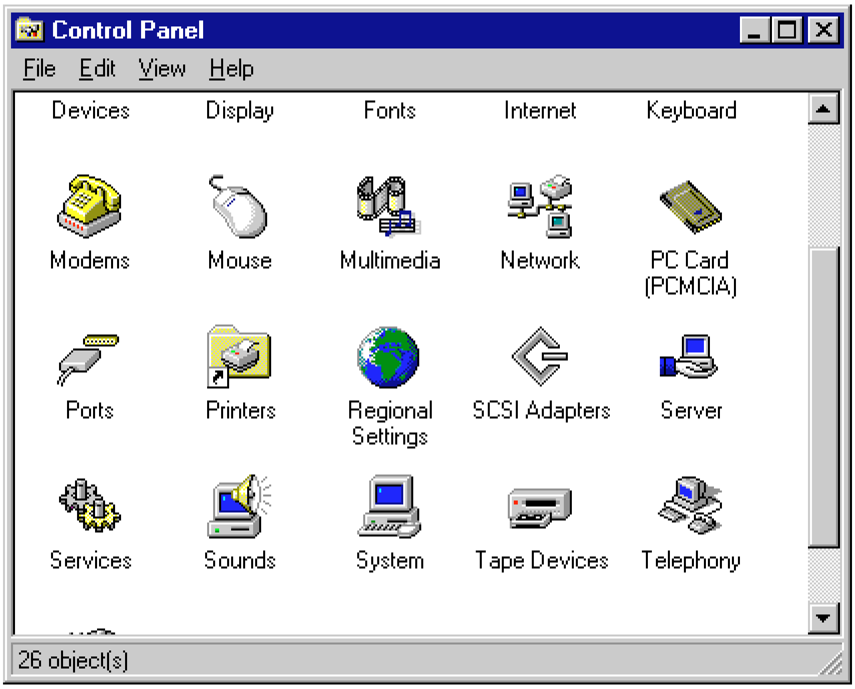
- The following will be required for the installation;
  - Intel PIIX PCI Bus Mastering IDE Drivers Windows NT 4.0 Disk (For a GX1 series control unit).. X 1

CAUTION

Ensure that the install disk is write-protected (write-disabled).

(1) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

→ The [Control Panel] window appears.

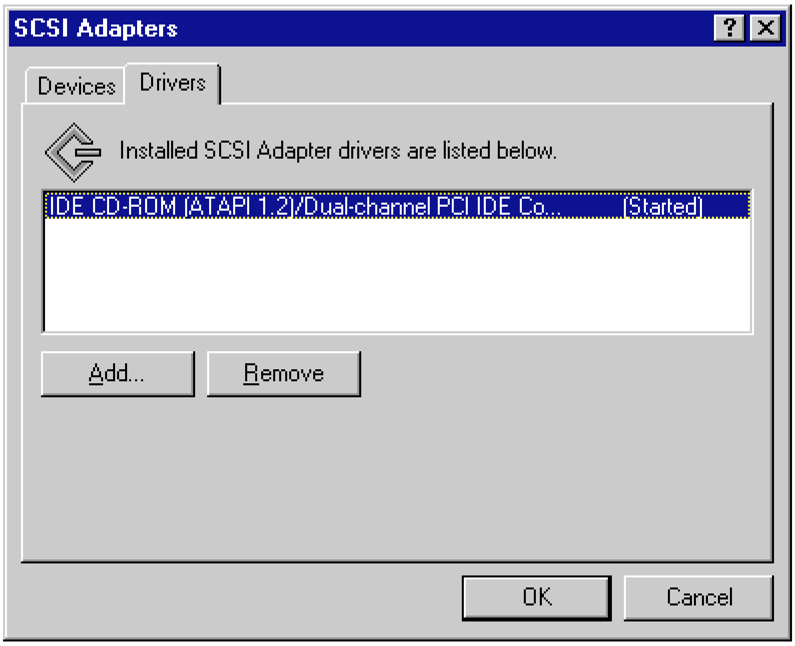

Control Panel
File Edit View Help
Devices
Display
Fonts
Internet
Keyboard
Modems
Mouse
Multimedia
Network
PC Card (PCMCIA)
Ports
Printers
Regional Settings
SCSI Adapters
Server
Services
Sounds
System
Tape Devices
Telephony
26 object(s)

(2) Double-click the [SCSI Adapters] icon.

→ The [SCSI Adapters] window appears.

(3) Click the [Drivers] tab.

→ The [Drivers] window appears.



SCSI Adapters
Devices
Drivers

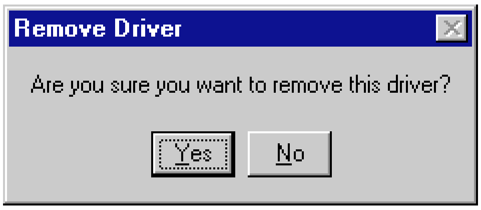
Installed SCSI Adapter drivers are listed below.

IDE CD-ROM (ATAPI 1.2)/Dual-channel PCI IDE Co... (Started)

Add...
Remove
OK
Cancel

(4) Check that “IDE CD-ROM (ATAPI 1.2)/Dual-channel PCI IDE Co....” is selected, then click [Remove].

→ The [Remove Driver] message appears prompting to choose a Yes or No for deleting the driver.



Remove Driver

Are you sure you want to remove this driver?

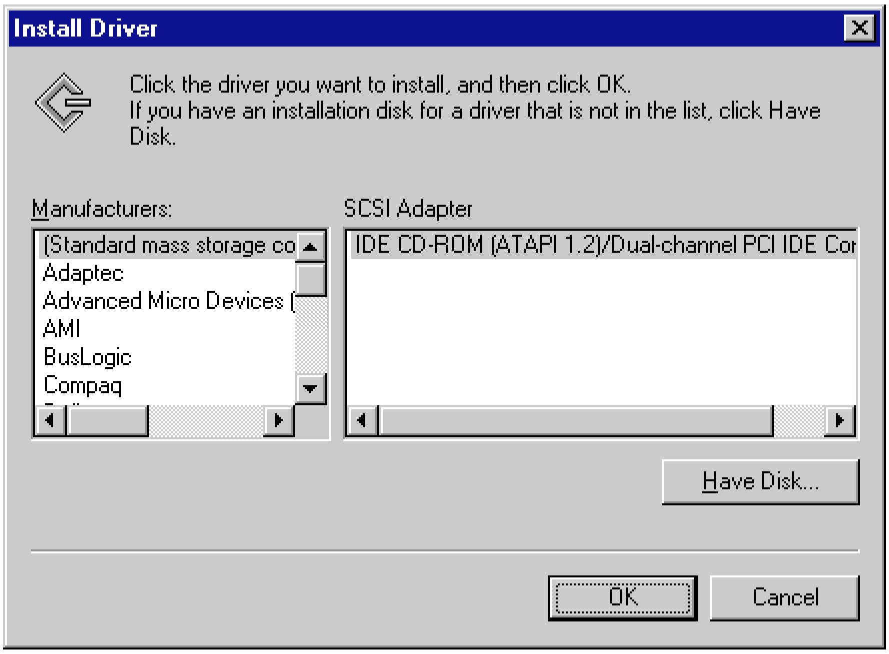
Yes
No

(5) Click [Yes].

→ As the installed SCSI adapter driver is deleted from the [SCSI Adapters], the field is now blank.

(6) Click [Add...].

→ The [Install Driver] window appears.



Install Driver

Click the driver you want to install, and then click OK.
If you have an installation disk for a driver that is not in the list, click Have Disk.

Manufacturers:

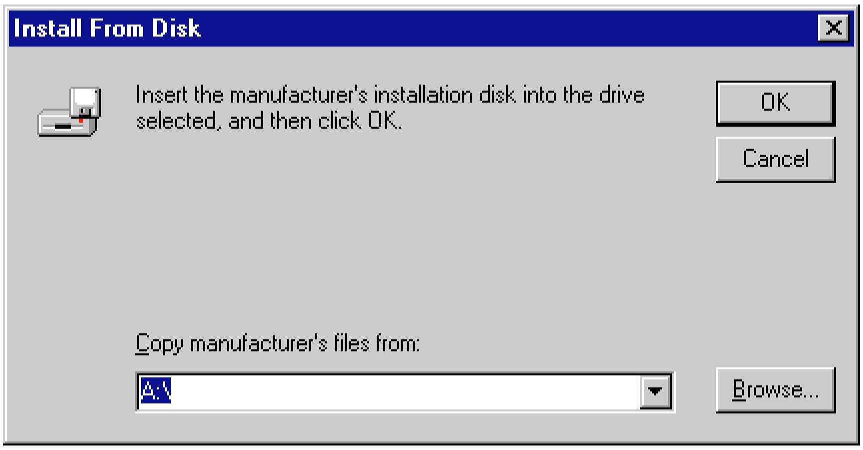
(Standard mass storage co
Adaptec
Advanced Micro Devices (
AMI
BusLogic
Compaq

SCSI Adapter

IDE CD-ROM (ATAPI 1.2)/Dual-channel PCI IDE Cor

(7) Click [Have Disk...].

→ The [Install From Disk] dialog appears.



Install From Disk

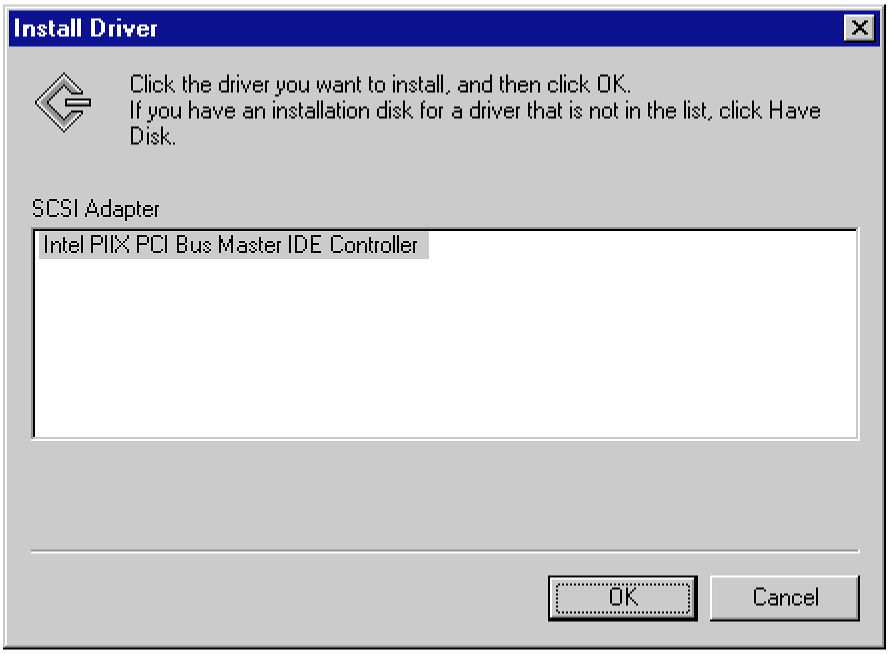
Insert the manufacturer's installation disk into the drive selected, and then click OK.

Copy manufacturer's files from:

A:\

(8) Insert the disk labeled “Intel PIIX PCI Bus Mastering IDE Drivers Windows NT 4.0” into the floppy disk drive and click [OK].

→ The [Install Driver] window appears.



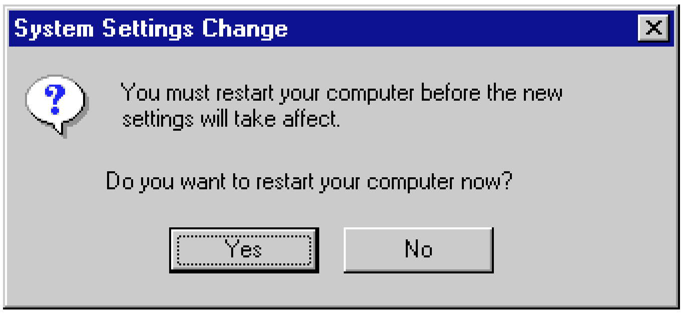
Click the driver you want to install, and then click OK.
If you have an installation disk for a driver that is not in the list, click Have Disk.

SCSI Adapter

Intel PIIX PCI Bus Master IDE Controller

(9) Ensure that the “Intel PIIX PCI Bus Master IDE Controller” is selected, then click [OK].

→ The [System Settings Change] message appears prompting to choose a Yes or No for restarting the computer.

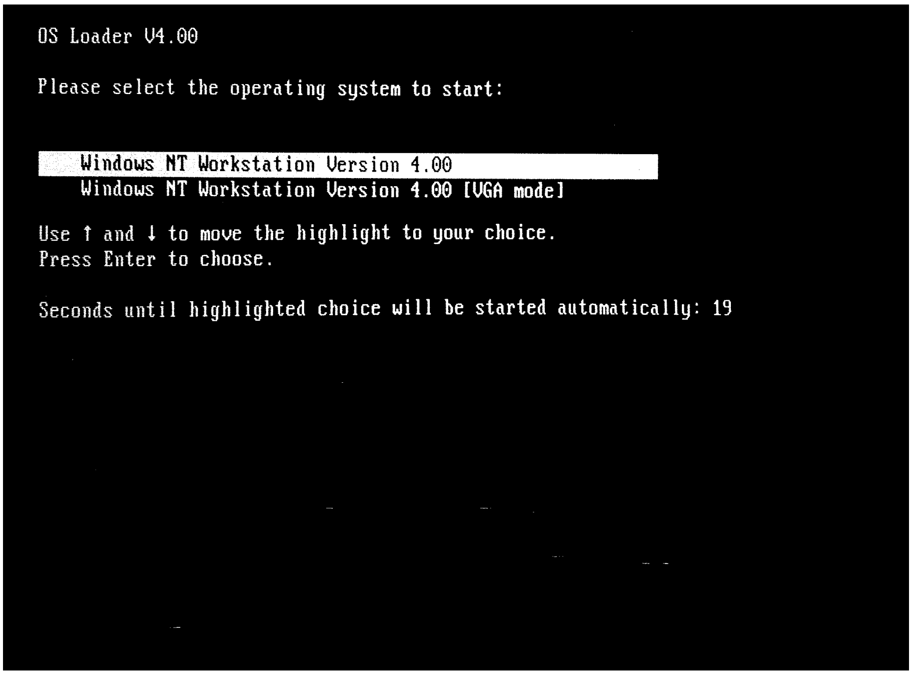


You must restart your computer before the new settings will take affect.

Do you want to restart your computer now?

(10) Remove the floppy disk from the drive and click [Yes].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



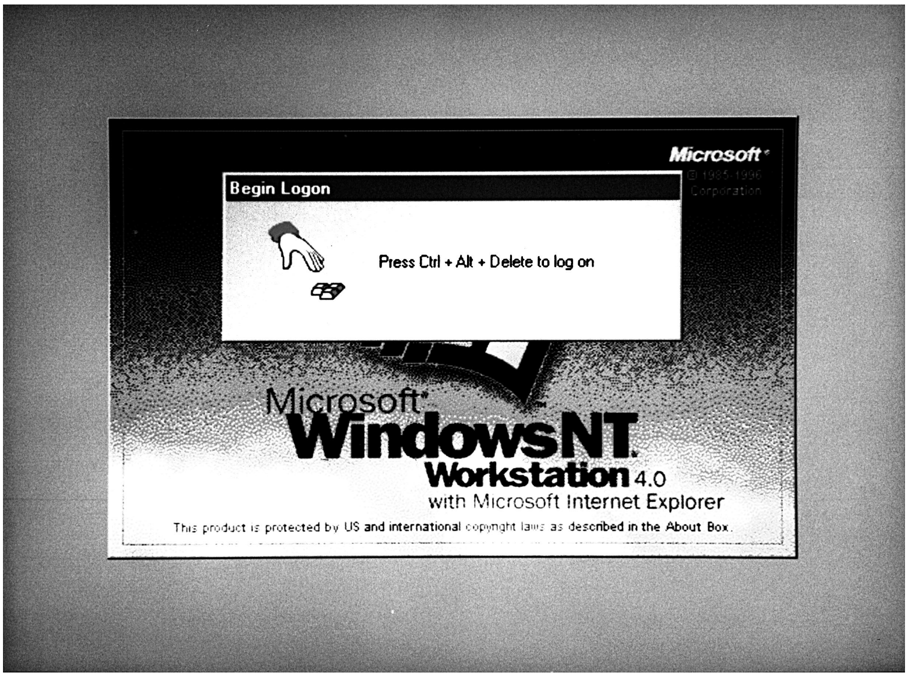
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(11) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



Begin Logon

Press Ctrl + Alt + Delete to log on

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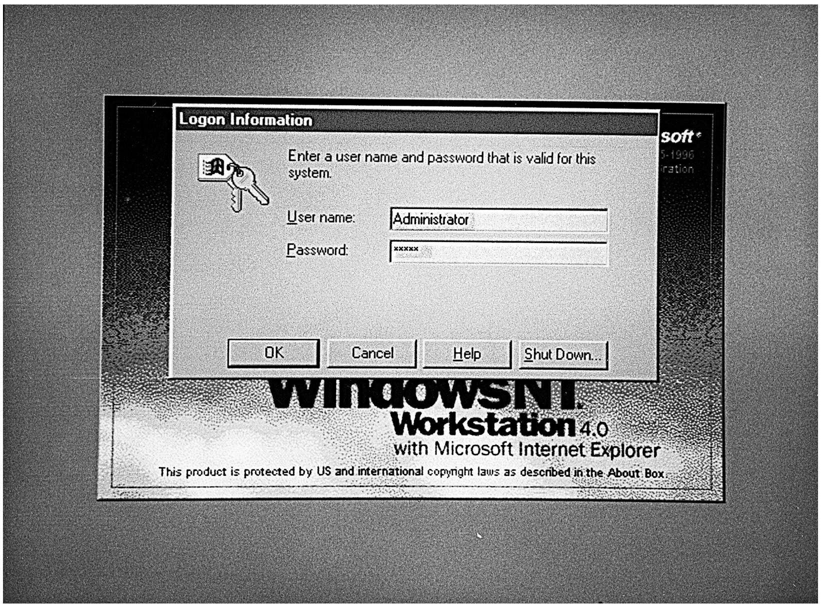
Corporation
Microsoft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer

(12) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.


Logon Information
OK
Cancel
Help
Shut Down...
Windows NT
Workstation 4.0
with Microsoft Internet Explorer

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

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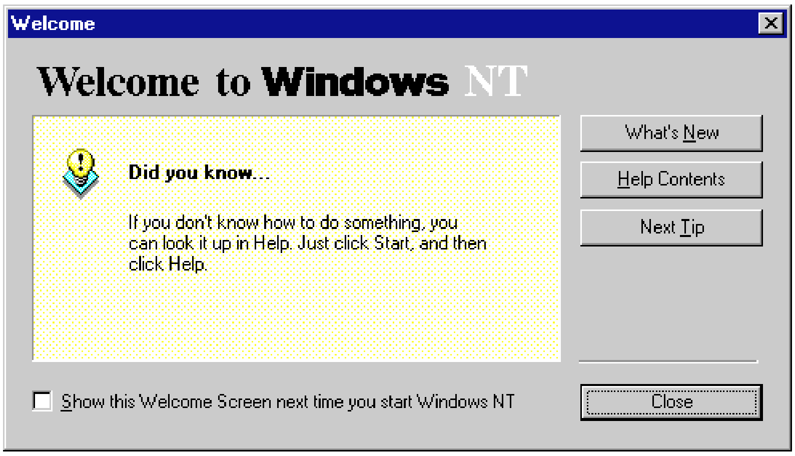
(13) Type "`pc-ps`" in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value "`Administrator`" for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the [Welcome to Windows NT] message appears.


Welcome
Welcome to Windows NT
What's New
Help Contents
Next Tip
Close

Did you know...

If you don't know how to do something, you can look it up in Help. Just click Start, and then click Help.

☐ Show this Welcome Screen next time you start Windows NT

(14) To inhibit the reappearance of the [Welcome to Windows NT] message, remove the check mark from the checkbox [Show this Welcome Screen next time you start Windows NT] in the bottom left-hand corner of the screen, then click [Close].

(15) Close the [Control Panel] window.

8.3 Installing the Windows NT Service Pack

◆ NOTE ◆

- For a DELL OptiPlex GX1 series control unit model, carry out either of the following procedure "■ Installing the Windows NT Service Pack 3" or "■ Installing the Windows NT Service Pack 4" depending on the version (3 or 4) of Service Pack accompanying the control unit.
- For GX110 and 150 series control unit models, carry out the following procedure "■ Installing the Windows NT Service Pack 5".

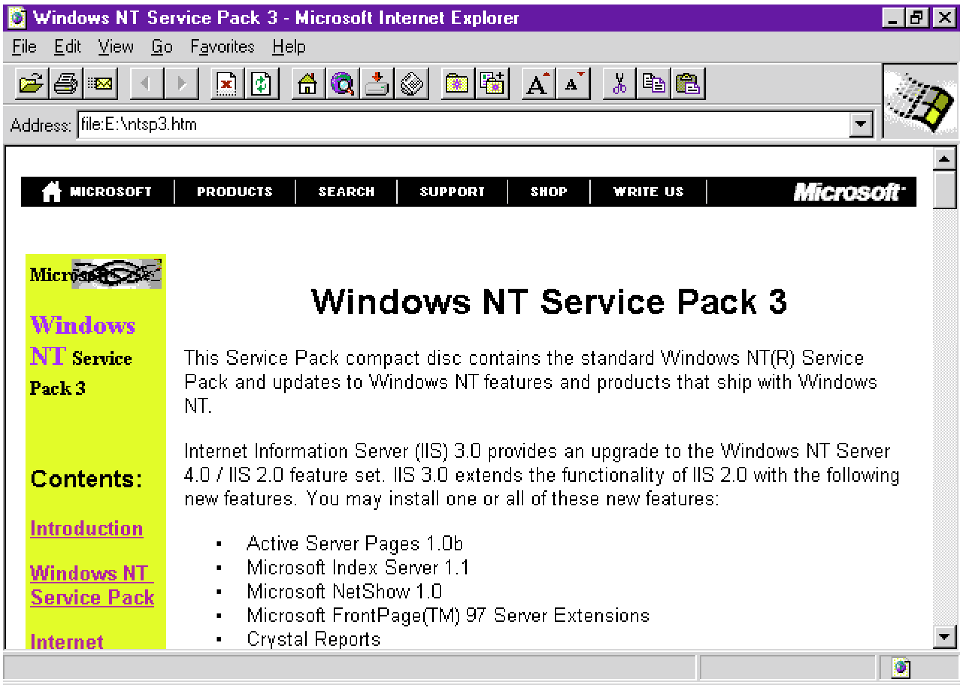
■ Installing the Windows NT Service Pack 3

● The following will be required for the installation;

- Windows NT Service Pack 3 CD-ROM .... X 1

(1) Insert the CD-ROM labeled "Windows NT Service Pack 3" into the CD-ROM drive.

→ The CD-ROM loads automatically and the [Windows NT Service Pack 3-Microsoft Internet Explorer] window appears.



Windows NT Service Pack 3 - Microsoft Internet Explorer
File Edit View Go Favorites Help
MICROSOFT
PRODUCTS
SEARCH
SUPPORT
SHOP
WRITE US
Microsoft
Microsoft
Windows NT Service Pack 3
Contents:
Introduction
Windows NT Service Pack
Internet

Address: file:E:\ntsp3.htm

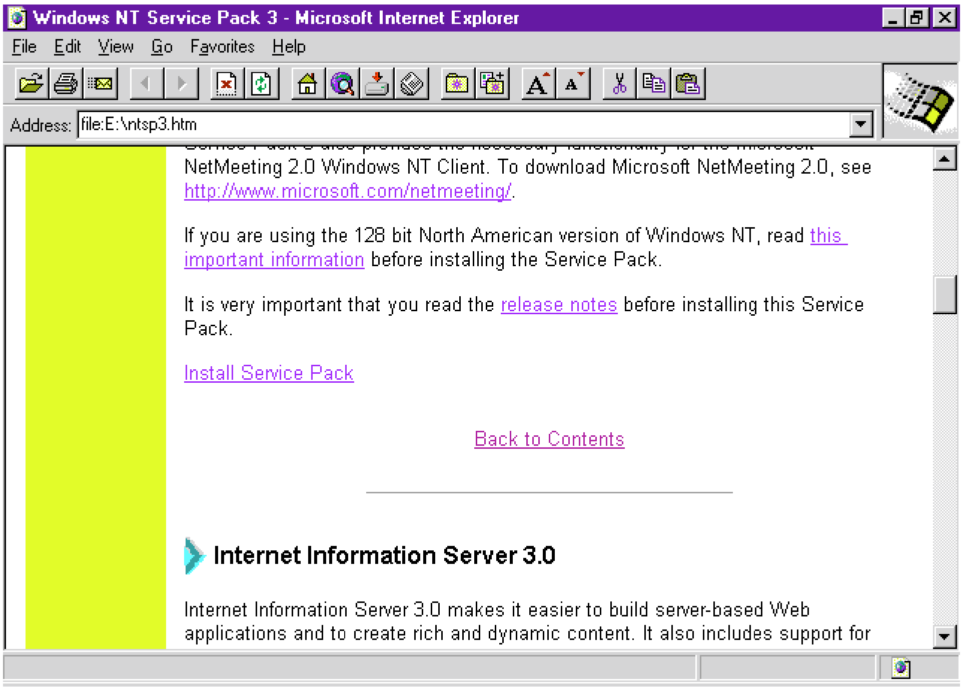
Windows NT Service Pack 3

This Service Pack compact disc contains the standard Windows NT(R) Service Pack and updates to Windows NT features and products that ship with Windows NT.

Internet Information Server (IIS) 3.0 provides an upgrade to the Windows NT Server 4.0 / IIS 2.0 feature set. IIS 3.0 extends the functionality of IIS 2.0 with the following new features. You may install one or all of these new features:

- Active Server Pages 1.0b
- Microsoft Index Server 1.1
- Microsoft NetShow 1.0
- Microsoft FrontPage(TM) 97 Server Extensions
- Crystal Reports

(2) Scroll the window down to display the [Install Service Pack] line.


Windows NT Service Pack 3 - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address: file:E:\ntsp3.htm

NetMeeting 2.0 Windows NT Client. To download Microsoft NetMeeting 2.0, see http://www.microsoft.com/netmeeting/.

If you are using the 128 bit North American version of Windows NT, read this important information before installing the Service Pack.

It is very important that you read the release notes before installing this Service Pack.

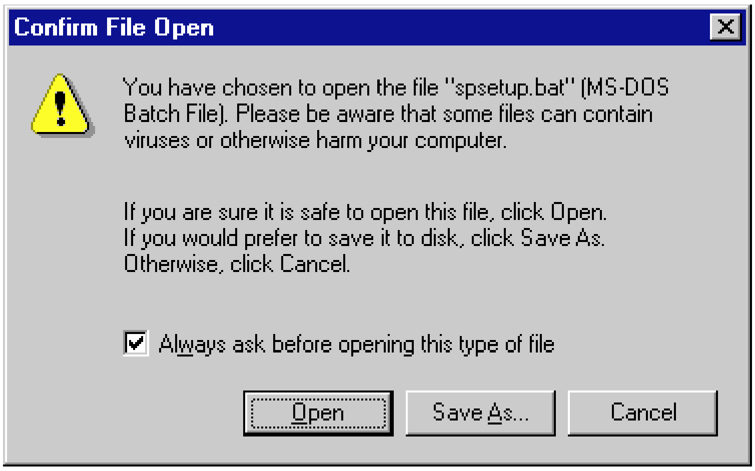
Install Service Pack

Back to Contents

Internet Information Server 3.0

Internet Information Server 3.0 makes it easier to build server-based Web applications and to create rich and dynamic content. It also includes support for

(3) Click [Install Service Pack] .
→ The [Confirm File Open] alert appears.


Confirm File Open

You have chosen to open the file "spsetup.bat" (MS-DOS Batch File). Please be aware that some files can contain viruses or otherwise harm your computer.

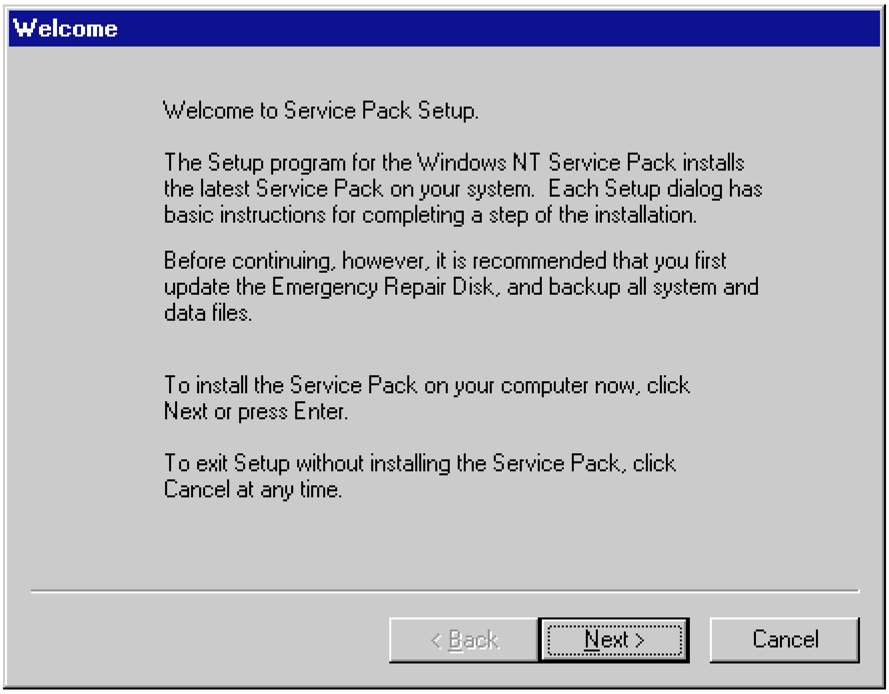
If you are sure it is safe to open this file, click Open.
If you would prefer to save it to disk, click Save As.
Otherwise, click Cancel.

☑ Always ask before opening this type of file

Open
Save As...
Cancel

(4) Click [Open].

→ The [Welcome to Service Pack Setup.] wizard appears.



Welcome

Welcome to Service Pack Setup.

The Setup program for the Windows NT Service Pack installs the latest Service Pack on your system. Each Setup dialog has basic instructions for completing a step of the installation.

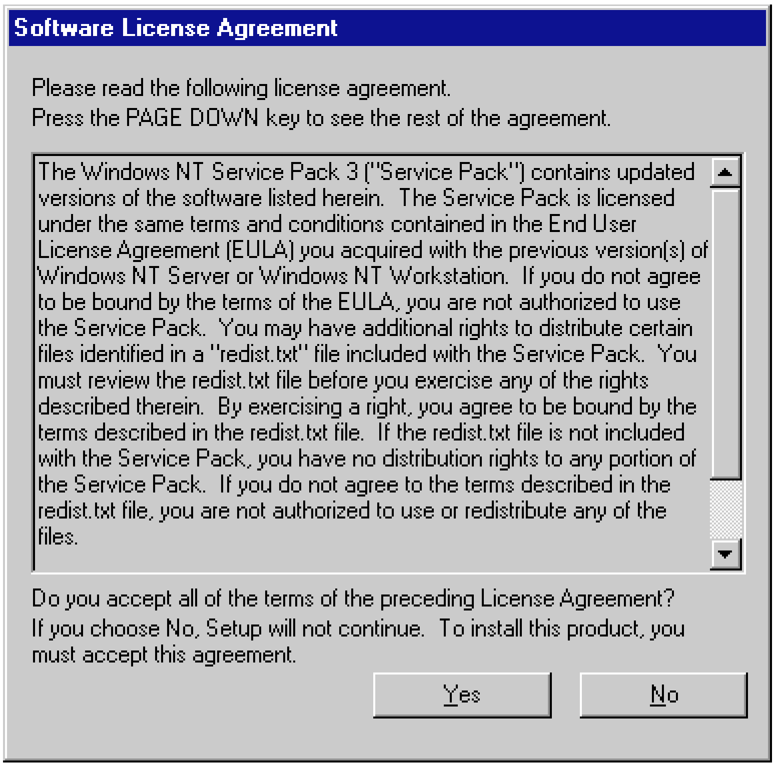
Before continuing, however, it is recommended that you first update the Emergency Repair Disk, and backup all system and data files.

To install the Service Pack on your computer now, click Next or press Enter.

To exit Setup without installing the Service Pack, click Cancel at any time.

(5) Click [Next>].

→ The [Software License Agreement] screen appears.



Software License Agreement

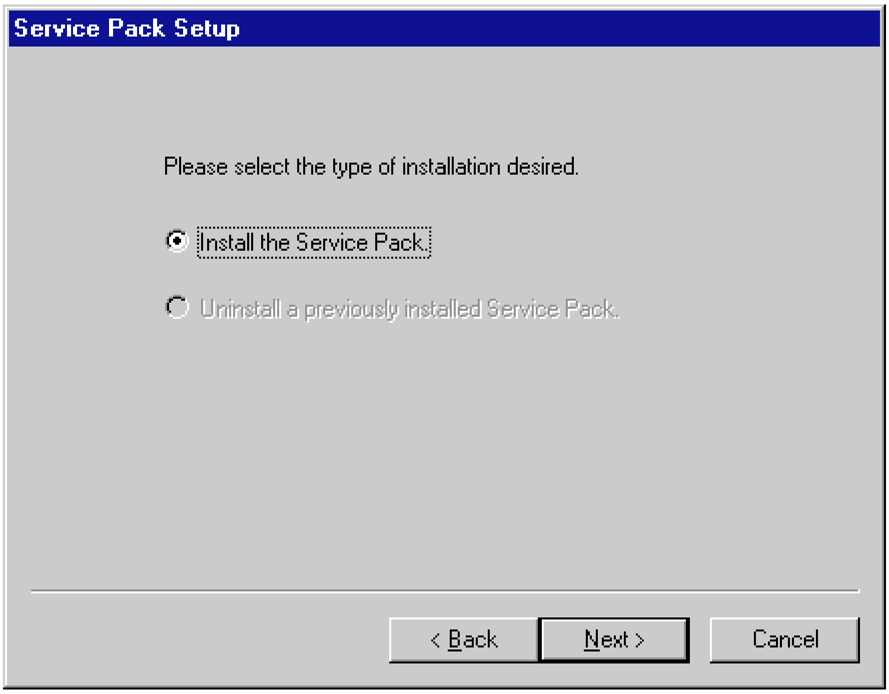
Please read the following license agreement.
Press the PAGE DOWN key to see the rest of the agreement.

The Windows NT Service Pack 3 ("Service Pack") contains updated versions of the software listed herein. The Service Pack is licensed under the same terms and conditions contained in the End User License Agreement (EULA) you acquired with the previous version(s) of Windows NT Server or Windows NT Workstation. If you do not agree to be bound by the terms of the EULA, you are not authorized to use the Service Pack. You may have additional rights to distribute certain files identified in a "redist.txt" file included with the Service Pack. You must review the redist.txt file before you exercise any of the rights described therein. By exercising a right, you agree to be bound by the terms described in the redist.txt file. If the redist.txt file is not included with the Service Pack, you have no distribution rights to any portion of the Service Pack. If you do not agree to the terms described in the redist.txt file, you are not authorized to use or redistribute any of the files.

Do you accept all of the terms of the preceding License Agreement? If you choose No, Setup will not continue. To install this product, you must accept this agreement.

(6) Click [Yes].

→ The window for selecting the type of installation desired appears.



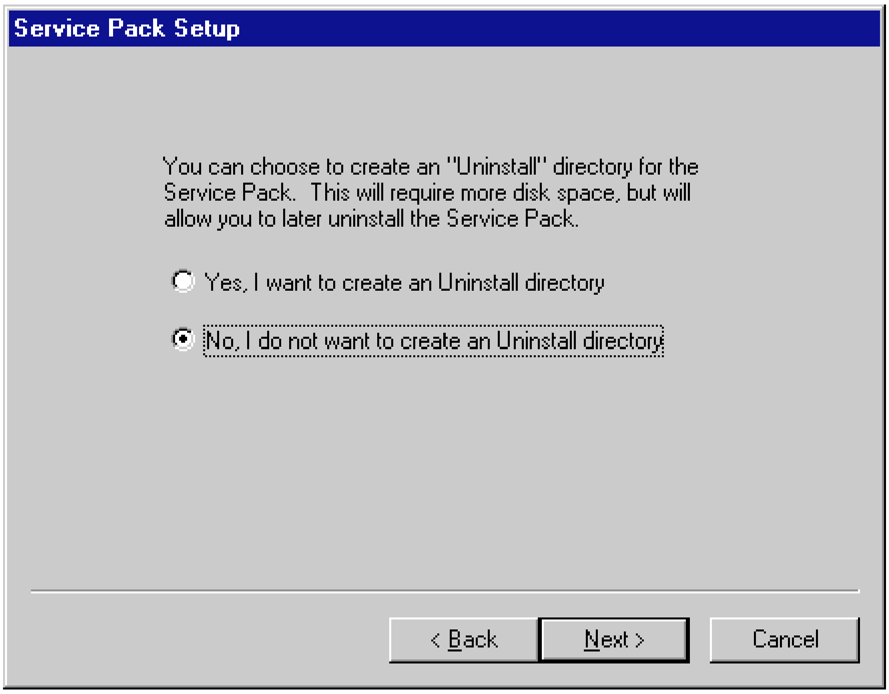
Please select the type of installation desired.

● Install the Service Pack.

○ Uninstall a previously installed Service Pack.

(7) Check that the [Install the Service Pack.] option is selected, then click [Next>].

→ The screen for creating an uninstall directory for the Service Pack appears.



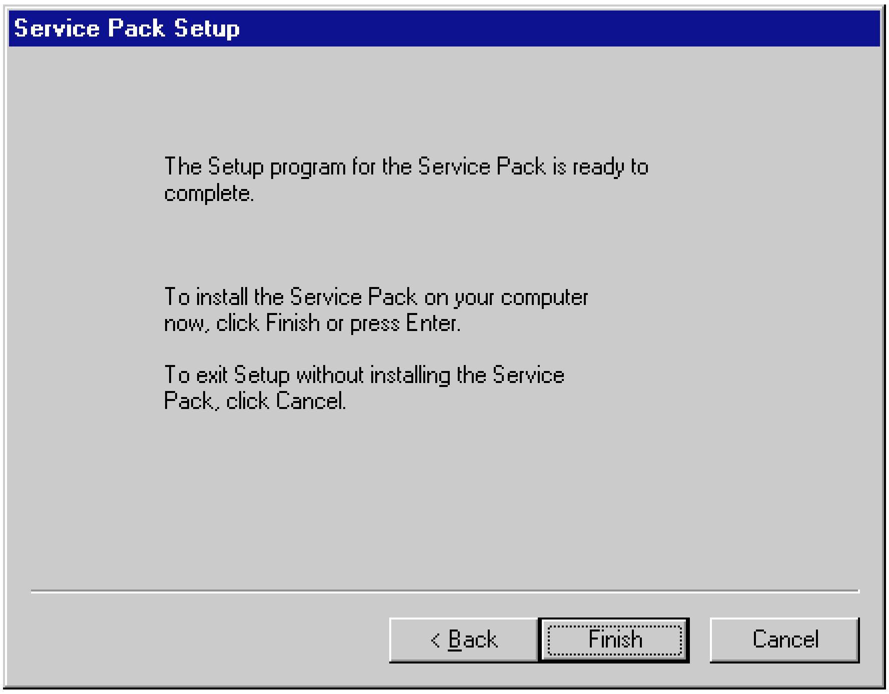
You can choose to create an "Uninstall" directory for the Service Pack. This will require more disk space, but will allow you to later uninstall the Service Pack.

○ Yes, I want to create an Uninstall directory

● No, I do not want to create an Uninstall directory

(8) Choose [No, I do not want to create an Uninstall directory], then click [Next>].

→ The message [The Setup program for the Service Pack is ready to complete.] appears.



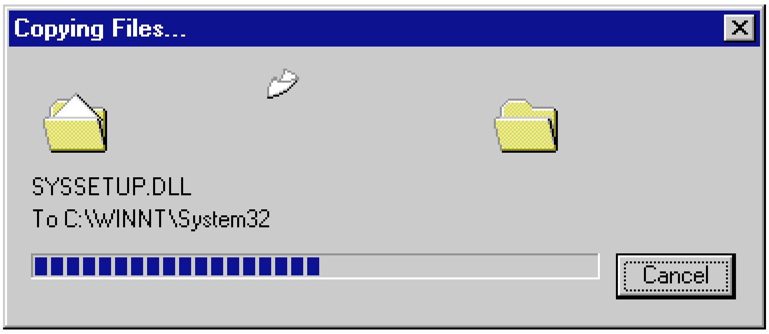
The Setup program for the Service Pack is ready to complete.

To install the Service Pack on your computer now, click Finish or press Enter.

To exit Setup without installing the Service Pack, click Cancel.

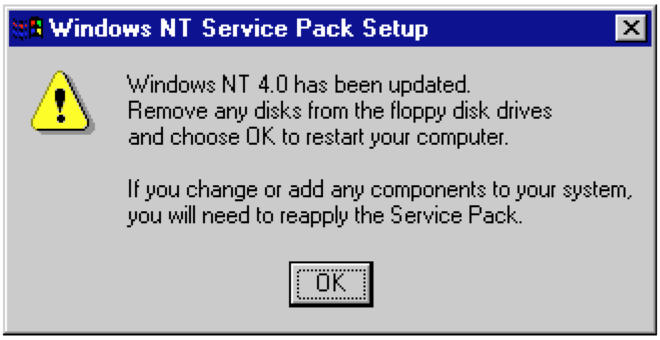
(9) Click [Finish].

→ The status window [Copying Files...] appears indicating that files are being copied.



SYSSETUP.DLL
To C:\WINNT\System32

→ When the installation has been successfully completed, the following alert appears prompting to restart the system.

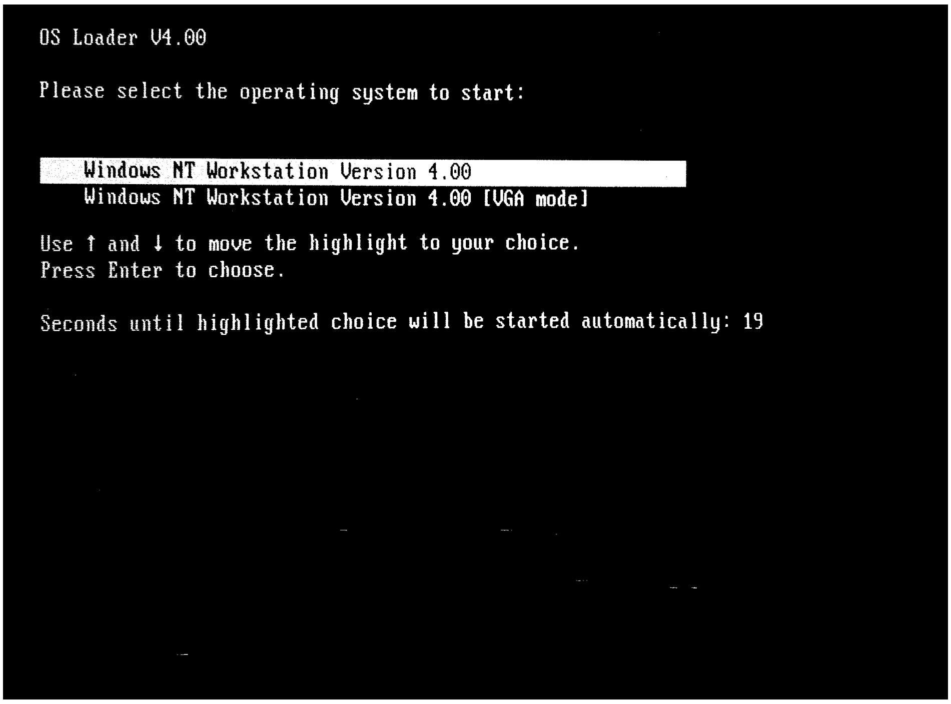


Windows NT 4.0 has been updated.
Remove any disks from the floppy disk drives and choose OK to restart your computer.

If you change or add any components to your system, you will need to reapply the Service Pack.

(10) Remove the CD-ROM from the CD-ROM drive and click [OK].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



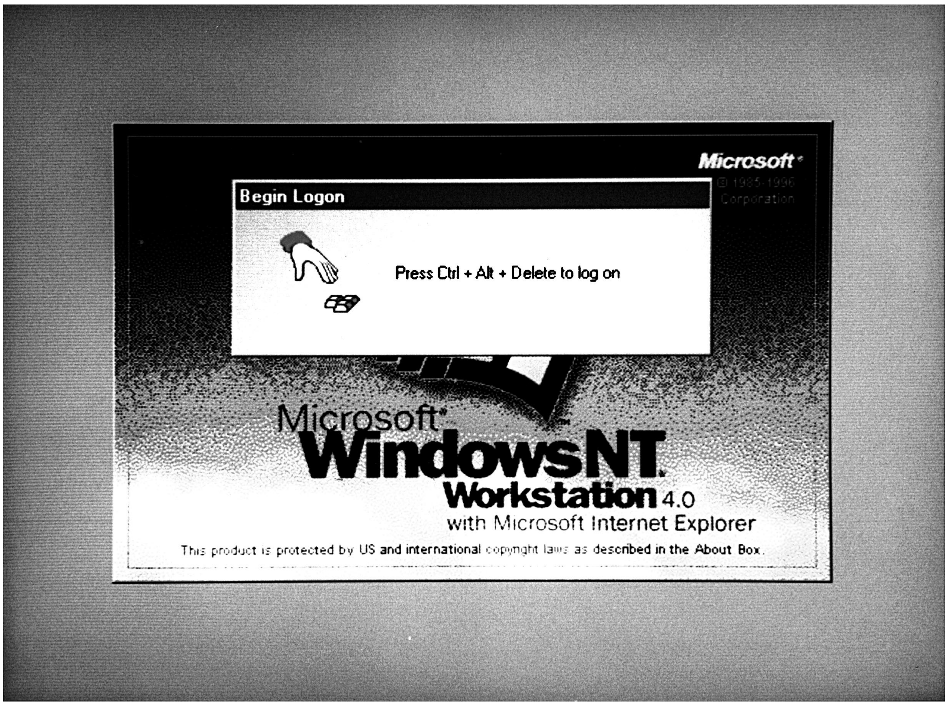
```
OS Loader V4.00

Please select the operating system to start:


     Windows NT Workstation Version 4.00
     Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(11) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



Begin Logon

Press Ctrl + Alt + Delete to log on

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Corporation
Microsoft
Windows NT
Workstation 4.0
with Microsoft Internet Explorer

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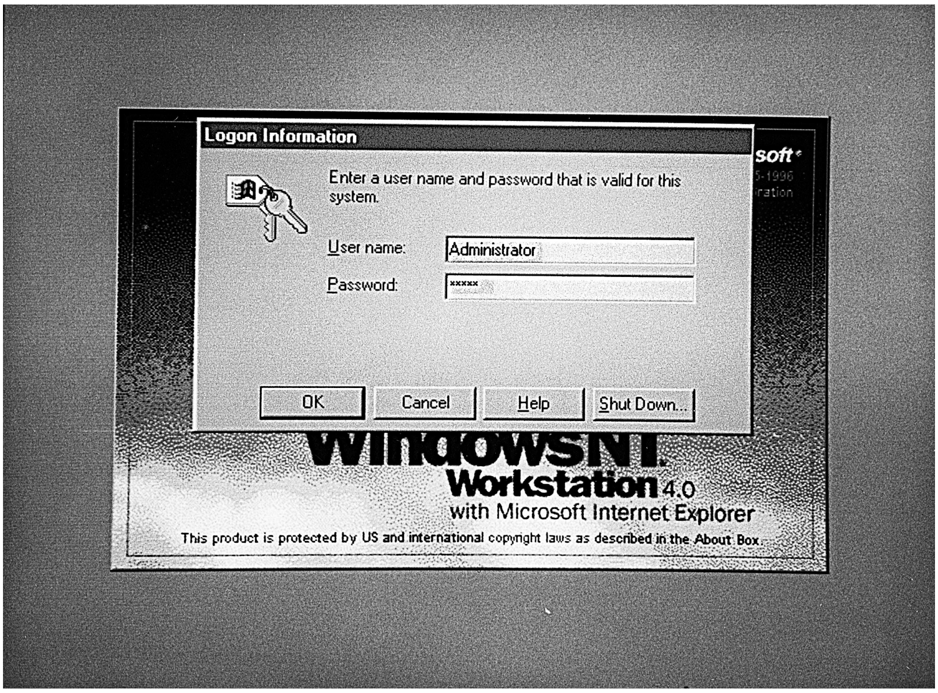
(12) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

OK
Cancel
Help
Shut Down...
soft
WindowsNT.
Workstation 4.0
with Microsoft Internet Explorer

This product is protected by US and international copyright laws as described in the About Box.

(13) Type “`pc-ps`” in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the Windows NT desktop appears.

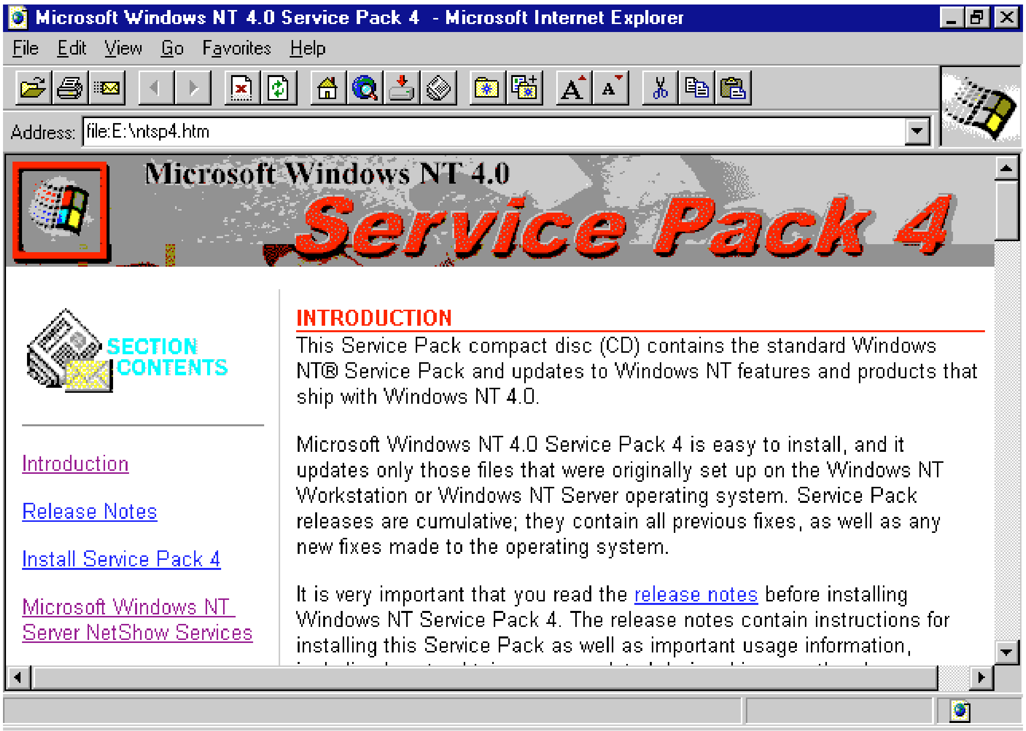
■ Installing the Windows NT Service Pack 4

● The following will be required for the installation;

- Windows NT Service Pack 4 CD-ROM .... X 1

(1) Insert the CD-ROM labeled “Windows NT Service Pack 4” into the CD-ROM drive.

→ The CD-ROM loads automatically and the [Microsoft Windows NT 4.0 Service Pack 4 - Microsoft Internet Explorer] window appears.


Microsoft Windows NT 4.0 Service Pack 4 - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address: file:E:\ntsp4.htm
Microsoft Windows NT 4.0
Service Pack 4
SECTION CONTENTS
Introduction
Release Notes
Install Service Pack 4
Microsoft Windows NT Server NetShow Services

INTRODUCTION

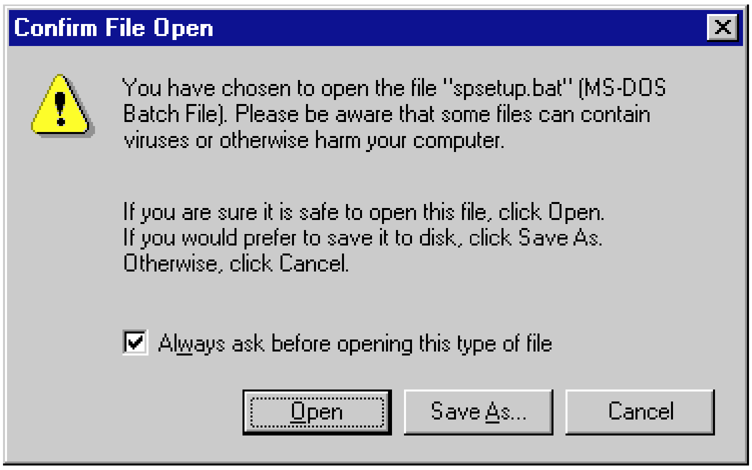
This Service Pack compact disc (CD) contains the standard Windows NT® Service Pack and updates to Windows NT features and products that ship with Windows NT 4.0.

Microsoft Windows NT 4.0 Service Pack 4 is easy to install, and it updates only those files that were originally set up on the Windows NT Workstation or Windows NT Server operating system. Service Pack releases are cumulative; they contain all previous fixes, as well as any new fixes made to the operating system.

It is very important that you read the release notes before installing Windows NT Service Pack 4. The release notes contain instructions for installing this Service Pack as well as important usage information,

(2) Click [Install Service Pack 4] in the [SECTION CONTENTS] field.

→ The [Confirm File Open] alert appears.


Confirm File Open
Open
Save As...
Cancel

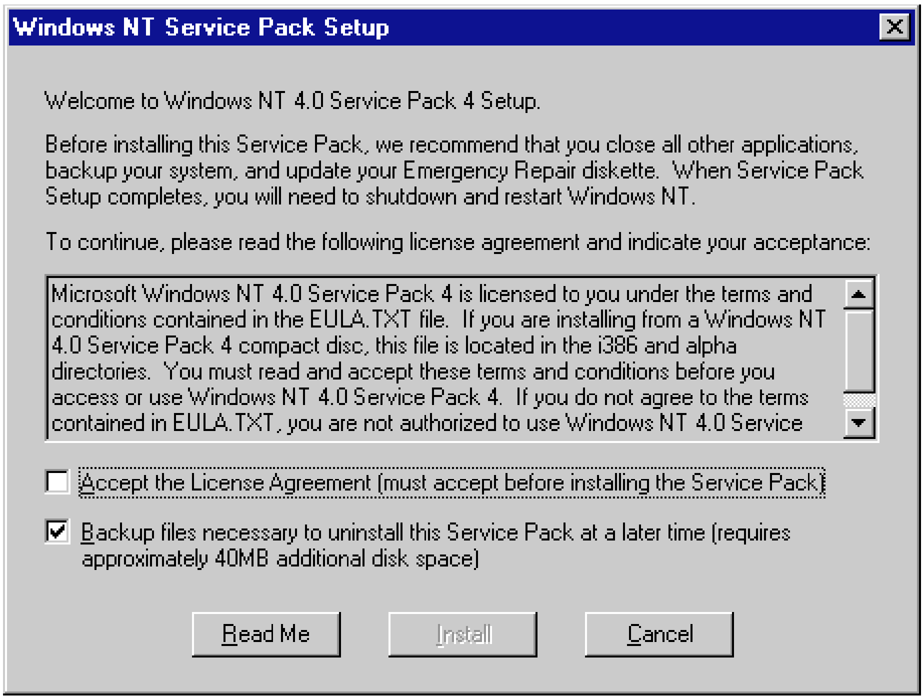
You have chosen to open the file "spsetup.bat" (MS-DOS Batch File). Please be aware that some files can contain viruses or otherwise harm your computer.

If you are sure it is safe to open this file, click Open.
If you would prefer to save it to disk, click Save As.
Otherwise, click Cancel.

☑ Always ask before opening this type of file

(3) Click [Open].

→ The [Windows NT Service Pack Setup] window appears.



Windows NT Service Pack Setup

Welcome to Windows NT 4.0 Service Pack 4 Setup.

Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.

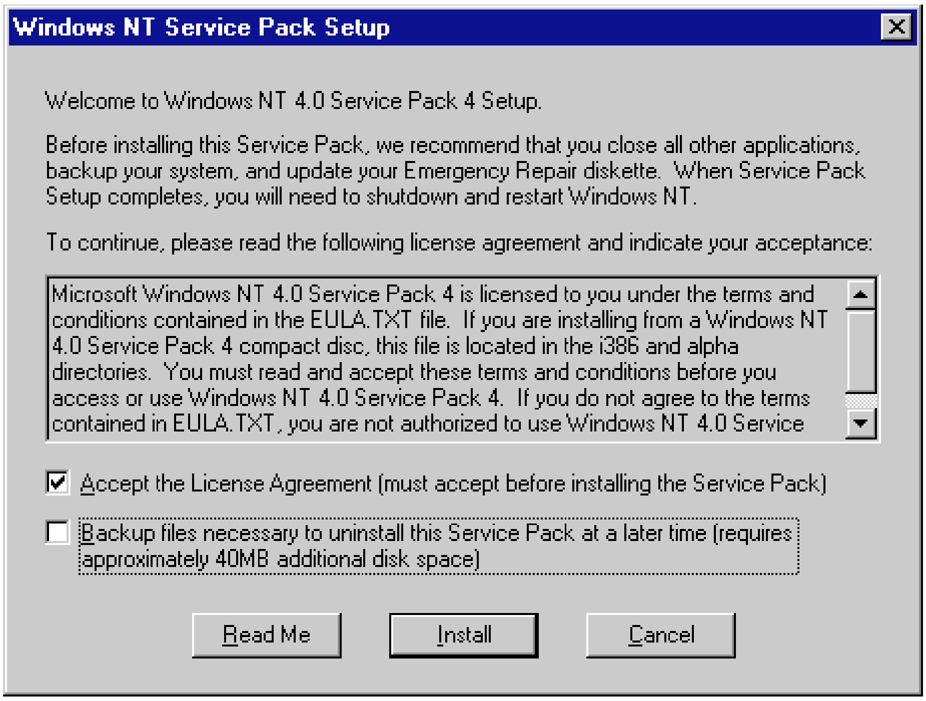
To continue, please read the following license agreement and indicate your acceptance:

Microsoft Windows NT 4.0 Service Pack 4 is licensed to you under the terms and conditions contained in the EULA.TXT file. If you are installing from a Windows NT 4.0 Service Pack 4 compact disc, this file is located in the i386 and alpha directories. You must read and accept these terms and conditions before you access or use Windows NT 4.0 Service Pack 4. If you do not agree to the terms contained in EULA.TXT, you are not authorized to use Windows NT 4.0 Service

☐ Accept the License Agreement (must accept before installing the Service Pack)

☑ Backup files necessary to uninstall this Service Pack at a later time (requires approximately 40MB additional disk space)

(4) Click [Accept the License Agreement ...] checkbox, and remove the check mark from [Backup files necessary to uninstall this Service Pack at a later time ...] checkbox.



Windows NT Service Pack Setup

Welcome to Windows NT 4.0 Service Pack 4 Setup.

Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.

To continue, please read the following license agreement and indicate your acceptance:

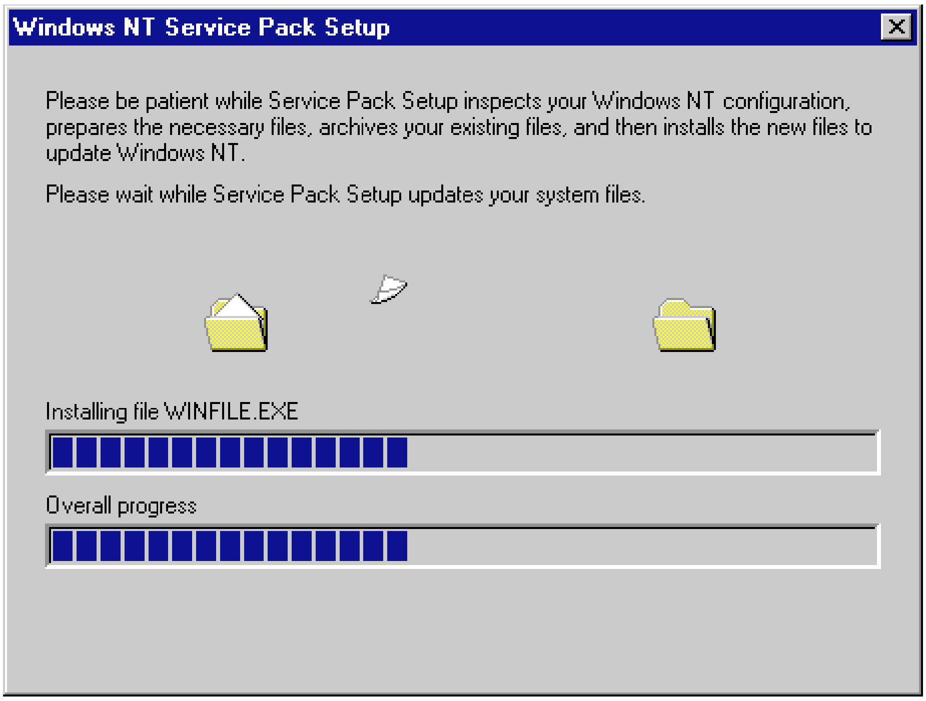
Microsoft Windows NT 4.0 Service Pack 4 is licensed to you under the terms and conditions contained in the EULA.TXT file. If you are installing from a Windows NT 4.0 Service Pack 4 compact disc, this file is located in the i386 and alpha directories. You must read and accept these terms and conditions before you access or use Windows NT 4.0 Service Pack 4. If you do not agree to the terms contained in EULA.TXT, you are not authorized to use Windows NT 4.0 Service

☑ Accept the License Agreement (must accept before installing the Service Pack)

☐ Backup files necessary to uninstall this Service Pack at a later time (requires approximately 40MB additional disk space)

(5) Click [Install].

→ The Service Pack installation process starts.

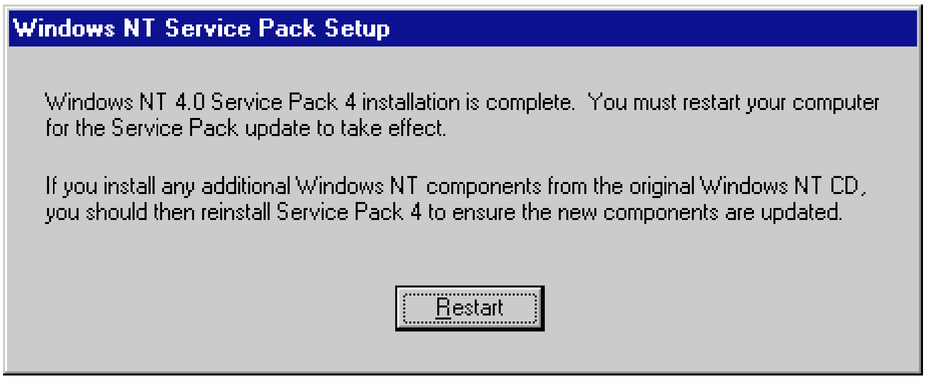


Please be patient while Service Pack Setup inspects your Windows NT configuration, prepares the necessary files, archives your existing files, and then installs the new files to update Windows NT.

Please wait while Service Pack Setup updates your system files.

Installing file WINFILE.EXE

→ When the installation has been successfully completed, the following message appears prompting to restart the system.

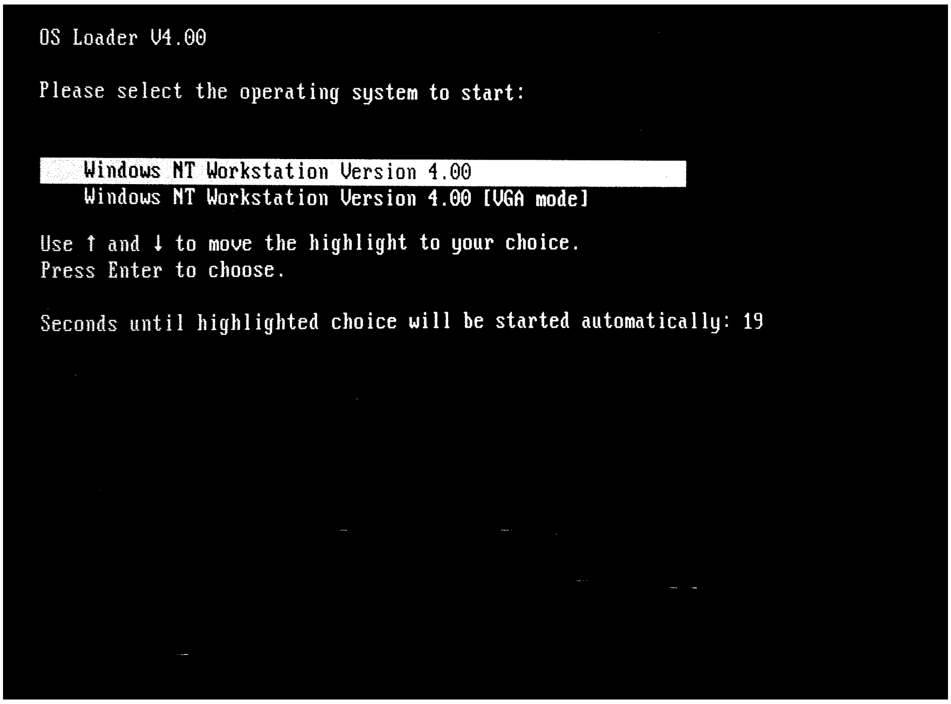


Windows NT 4.0 Service Pack 4 installation is complete. You must restart your computer for the Service Pack update to take effect.

If you install any additional Windows NT components from the original Windows NT CD, you should then reinstall Service Pack 4 to ensure the new components are updated.

(6) Remove the CD-ROM from the CD-ROM drive and click [Restart].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



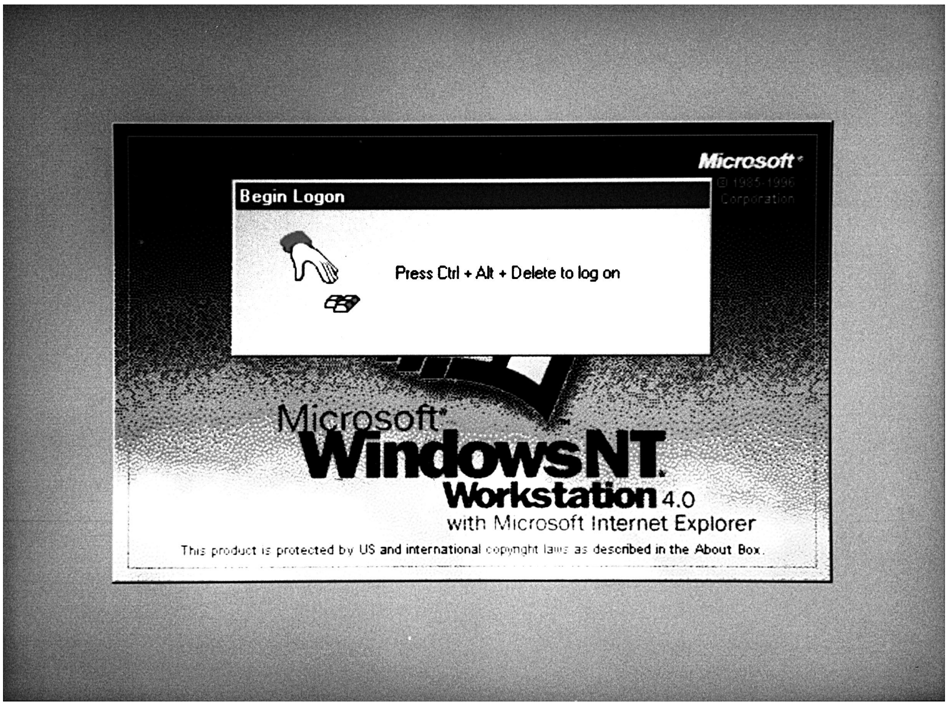
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(7) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.

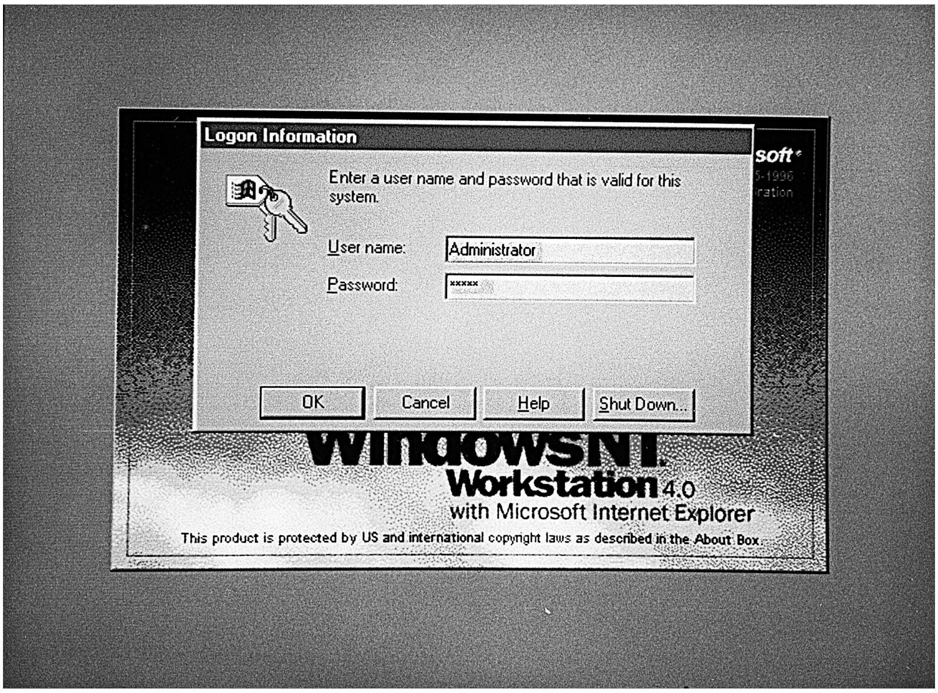

Microsoft
© 1985-1996
Corporation
Begin Logon
Microsoft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer

Press Ctrl + Alt + Delete to log on

This product is protected by US and international copyright laws as described in the About Box.

(8) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

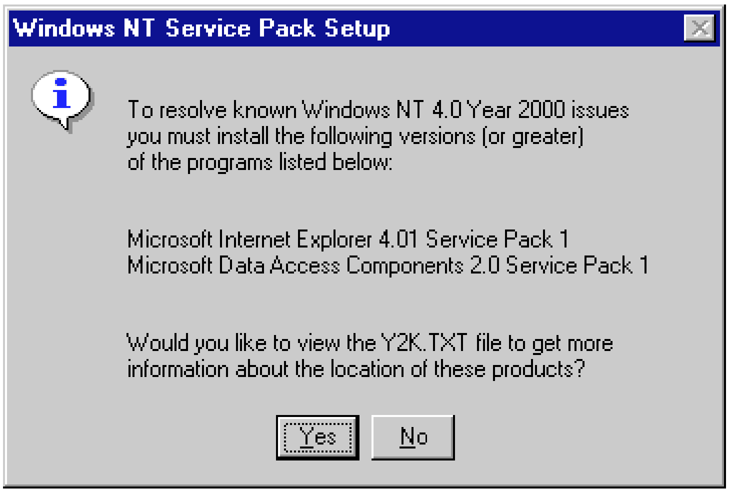
OK
Cancel
Help
Shut Down...
Windows NT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(9) Type “`pc-ps`” in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ The [Windows NT Service Pack setup] information appears.



Windows NT Service Pack Setup

To resolve known Windows NT 4.0 Year 2000 issues you must install the following versions (or greater) of the programs listed below:

Microsoft Internet Explorer 4.01 Service Pack 1
Microsoft Data Access Components 2.0 Service Pack 1

Would you like to view the Y2K.TXT file to get more information about the location of these products?

(10) Click [No], because of the listed programs are unnecessary for the FN-PS551 application program.

→ Once the computer has logged onto Windows NT, the Windows NT desktop appears.

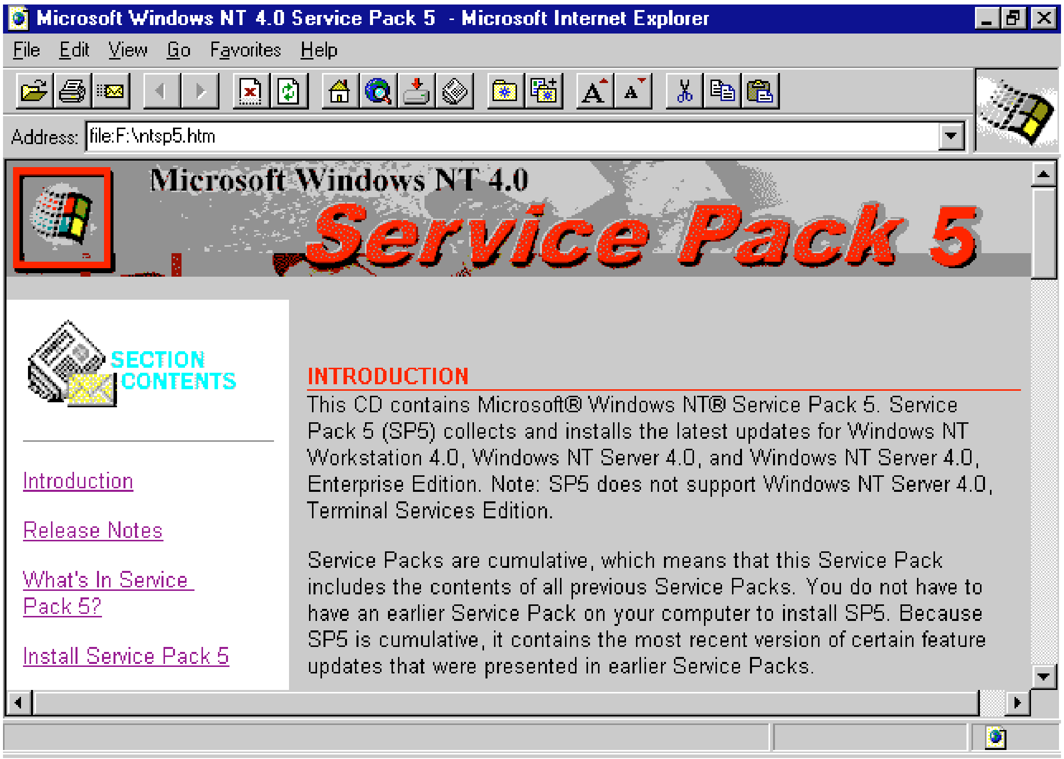
■ Installing the Windows NT Service Pack 5

● The following will be required for the installation;

- Windows NT Service Pack 5 CD-ROM .... X 1

(1) Insert the CD-ROM labeled “Windows NT Service Pack 5” into the CD-ROM drive.

→ The CD-ROM loads automatically and the [Microsoft Windows NT 4.0 Service Pack 5 - Microsoft Internet Explorer] window appears.

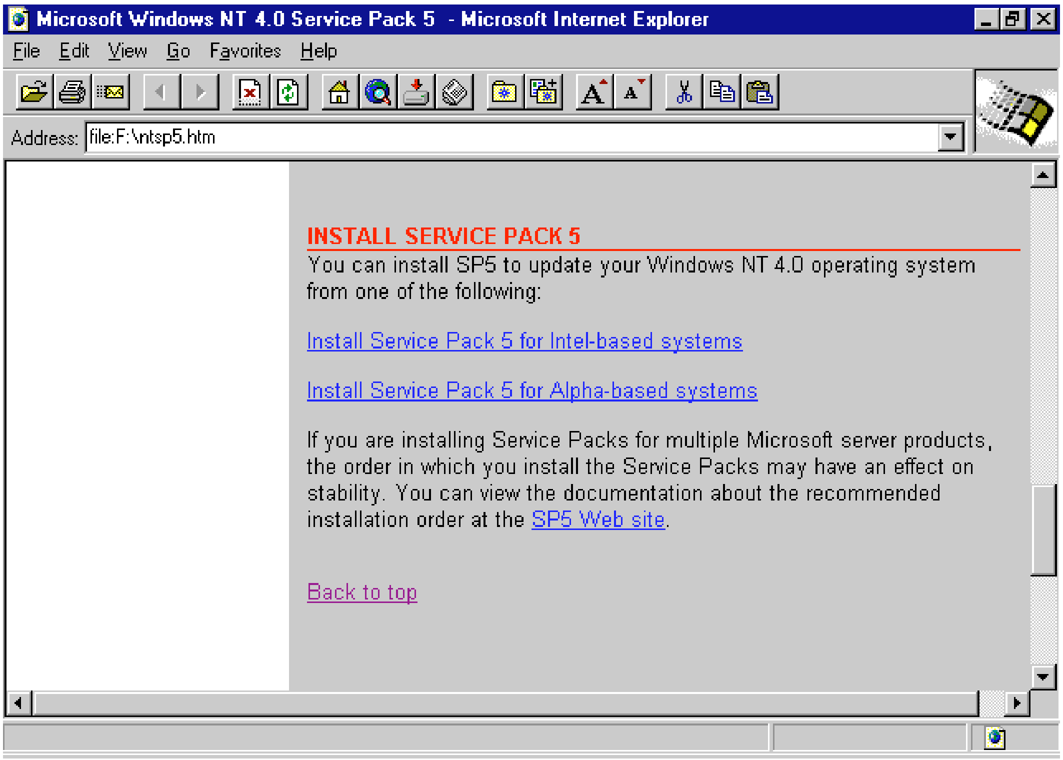

Microsoft Windows NT 4.0 Service Pack 5 - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address: file:F:\ntsp5.htm
Microsoft Windows NT 4.0
Service Pack 5
SECTION CONTENTS
Introduction
Release Notes
What's In Service Pack 5?
Install Service Pack 5

INTRODUCTION

This CD contains Microsoft® Windows NT® Service Pack 5. Service Pack 5 (SP5) collects and installs the latest updates for Windows NT Workstation 4.0, Windows NT Server 4.0, and Windows NT Server 4.0, Enterprise Edition. Note: SP5 does not support Windows NT Server 4.0, Terminal Services Edition.

Service Packs are cumulative, which means that this Service Pack includes the contents of all previous Service Packs. You do not have to have an earlier Service Pack on your computer to install SP5. Because SP5 is cumulative, it contains the most recent version of certain feature updates that were presented in earlier Service Packs.

(2) Scroll the window down to display the [Install Service Pack 5 for Intel-based systems] line.



Microsoft Windows NT 4.0 Service Pack 5 - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address: file:F:\ntsp5.htm

INSTALL SERVICE PACK 5

You can install SP5 to update your Windows NT 4.0 operating system from one of the following:

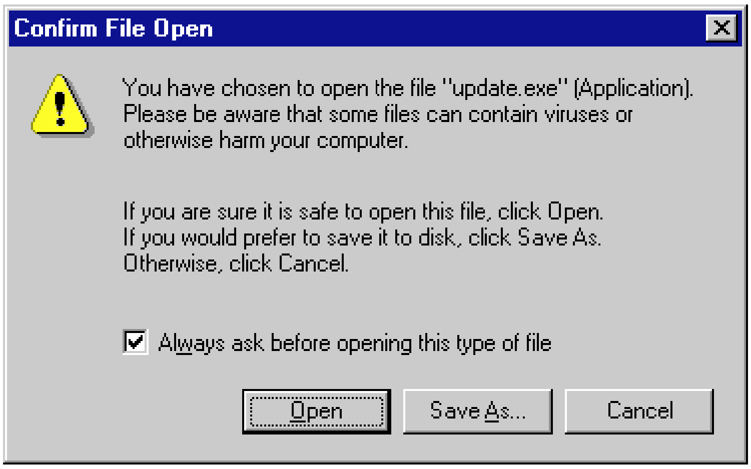
Install Service Pack 5 for Intel-based systems

Install Service Pack 5 for Alpha-based systems

If you are installing Service Packs for multiple Microsoft server products, the order in which you install the Service Packs may have an effect on stability. You can view the documentation about the recommended installation order at the SP5 Web site.

Back to top

(3) Click [Install Service Pack 5 for Intel-based systems].
→ The [Confirm File Open] alert appears.



Confirm File Open

You have chosen to open the file "update.exe" (Application). Please be aware that some files can contain viruses or otherwise harm your computer.

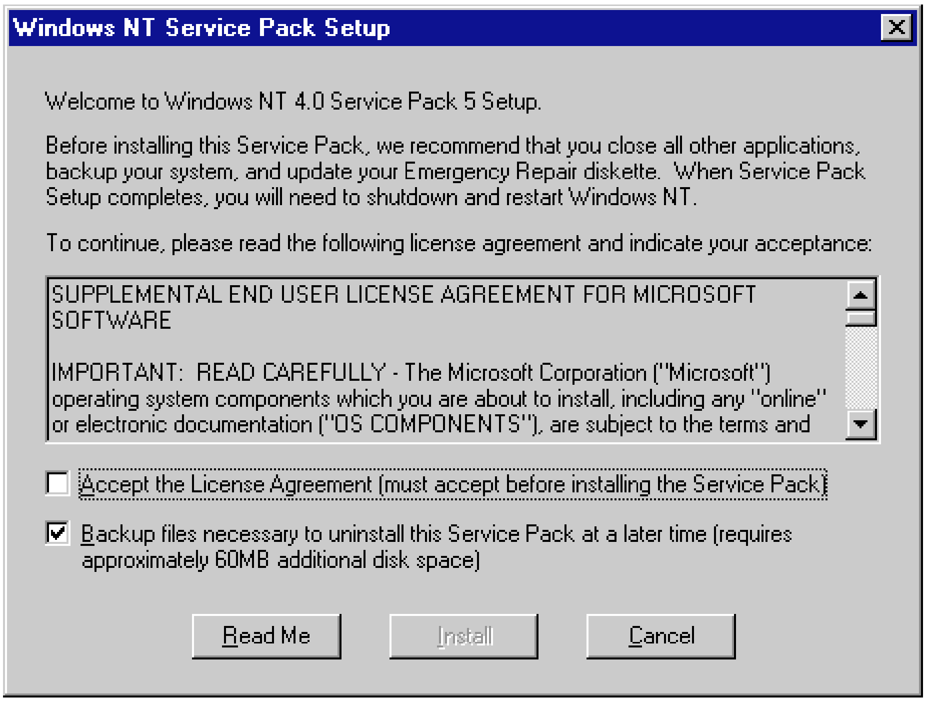
If you are sure it is safe to open this file, click Open.
If you would prefer to save it to disk, click Save As.
Otherwise, click Cancel.

☑ Always ask before opening this type of file

Open
Save As...
Cancel

(4) Click [Open].

→ The [Windows NT Service Pack Setup] window appears.



Welcome to Windows NT 4.0 Service Pack 5 Setup.

Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.

To continue, please read the following license agreement and indicate your acceptance:

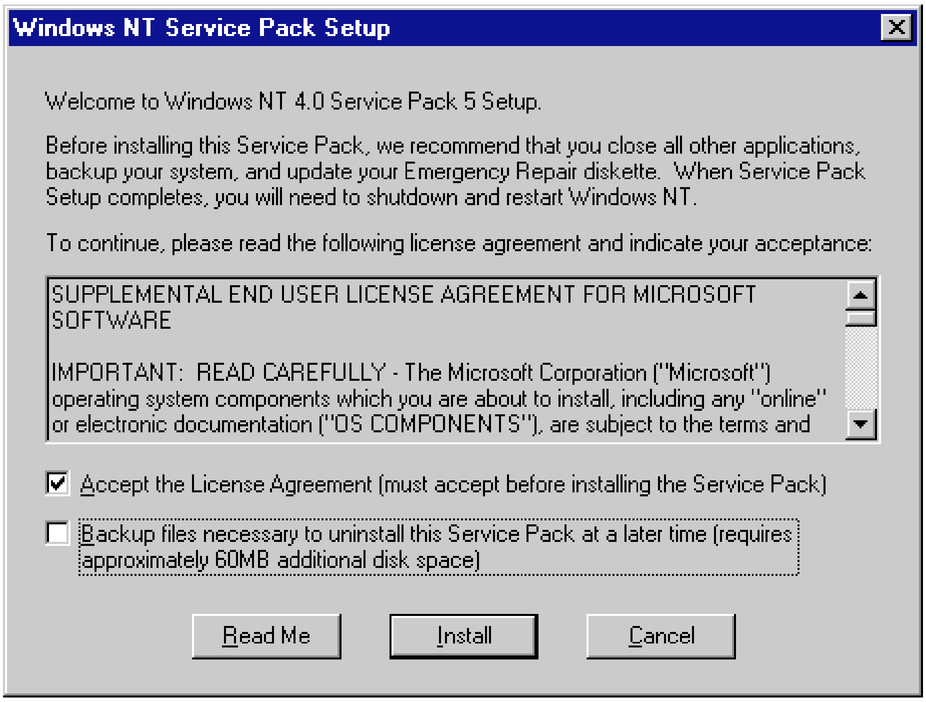
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE

IMPORTANT: READ CAREFULLY - The Microsoft Corporation ("Microsoft") operating system components which you are about to install, including any "online" or electronic documentation ("OS COMPONENTS"), are subject to the terms and

☐ Accept the License Agreement (must accept before installing the Service Pack)

☑ Backup files necessary to uninstall this Service Pack at a later time (requires approximately 60MB additional disk space)

(5) Click [Accept the License Agreement ...] checkbox, and remove the check mark from [Backup files necessary to uninstall this Service Pack at a later time ...] checkbox.



Welcome to Windows NT 4.0 Service Pack 5 Setup.

Before installing this Service Pack, we recommend that you close all other applications, backup your system, and update your Emergency Repair diskette. When Service Pack Setup completes, you will need to shutdown and restart Windows NT.

To continue, please read the following license agreement and indicate your acceptance:

SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE

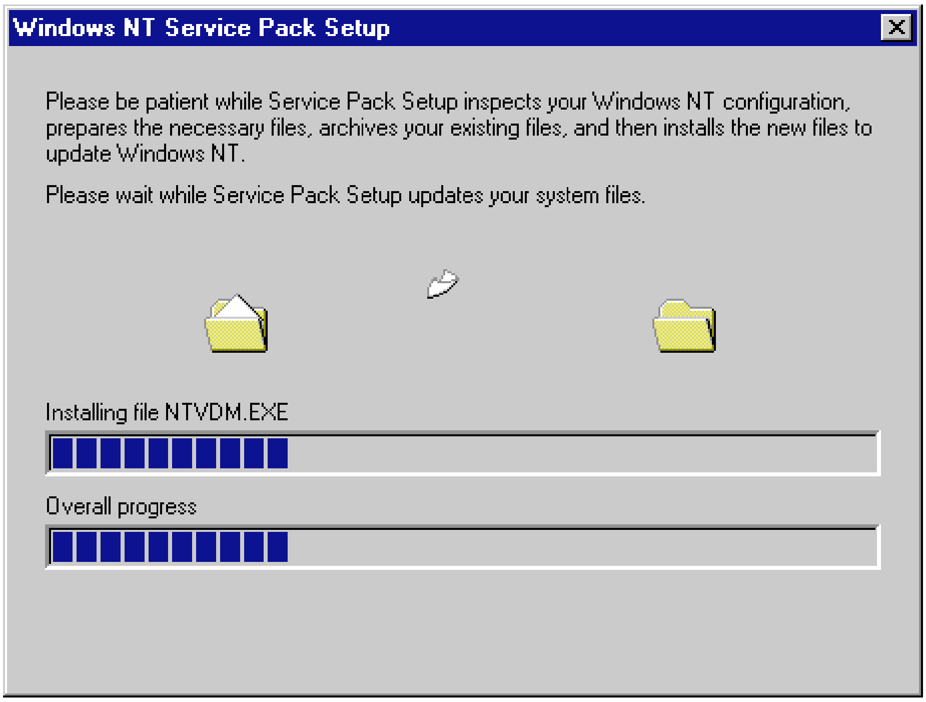
IMPORTANT: READ CAREFULLY - The Microsoft Corporation ("Microsoft") operating system components which you are about to install, including any "online" or electronic documentation ("OS COMPONENTS"), are subject to the terms and

☑ Accept the License Agreement (must accept before installing the Service Pack)

☐ Backup files necessary to uninstall this Service Pack at a later time (requires approximately 60MB additional disk space)

(6) Click [Install].

→ The Service Pack installation process starts.



Windows NT Service Pack Setup

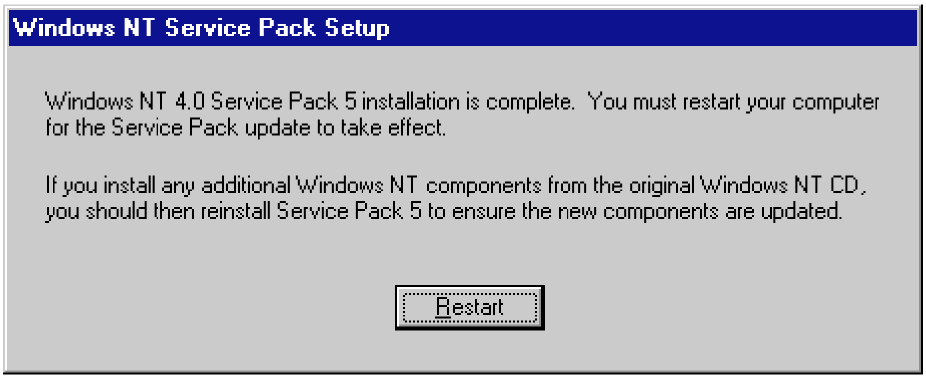
Please be patient while Service Pack Setup inspects your Windows NT configuration, prepares the necessary files, archives your existing files, and then installs the new files to update Windows NT.

Please wait while Service Pack Setup updates your system files.

Installing file NTVDM.EXE

Overall progress

→ When the installation has been successfully completed, the following message appears prompting to restart the system.



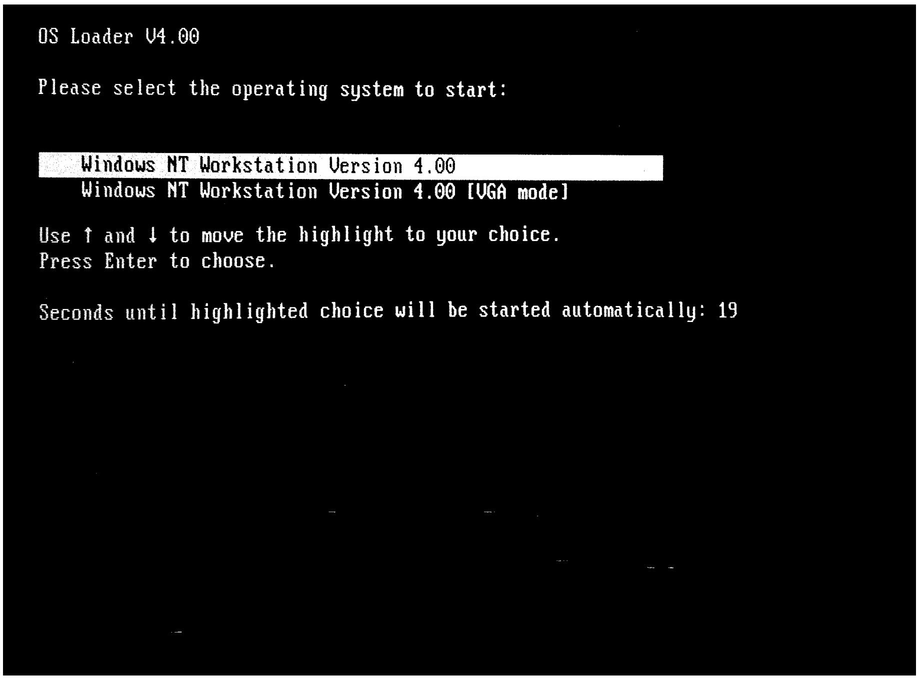
Windows NT Service Pack Setup

Windows NT 4.0 Service Pack 5 installation is complete. You must restart your computer for the Service Pack update to take effect.

If you install any additional Windows NT components from the original Windows NT CD, you should then reinstall Service Pack 5 to ensure the new components are updated.

(7) Remove the CD-ROM from the CD-ROM drive and click [Restart].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



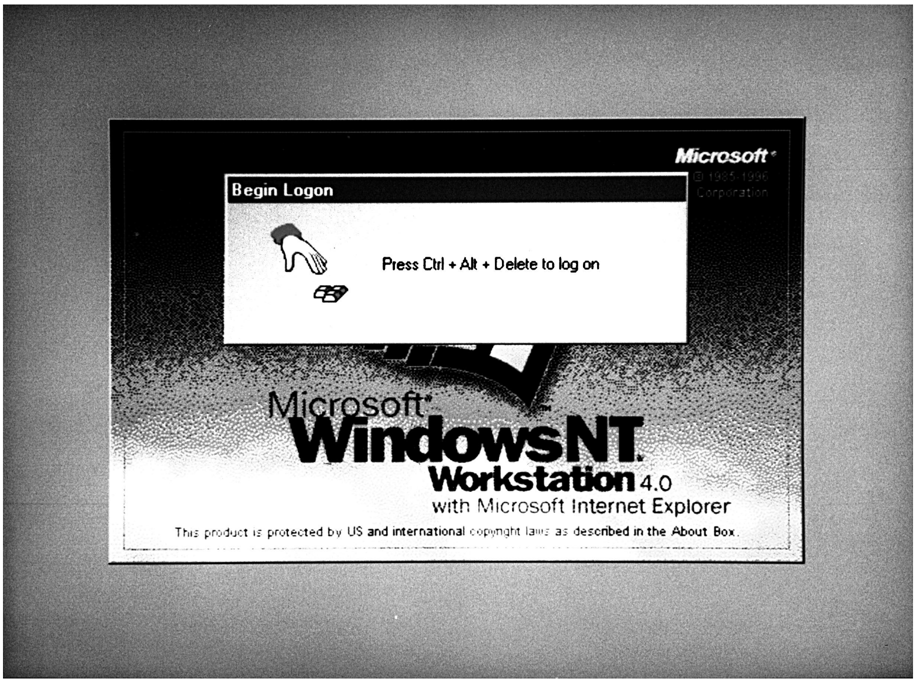
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(8) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



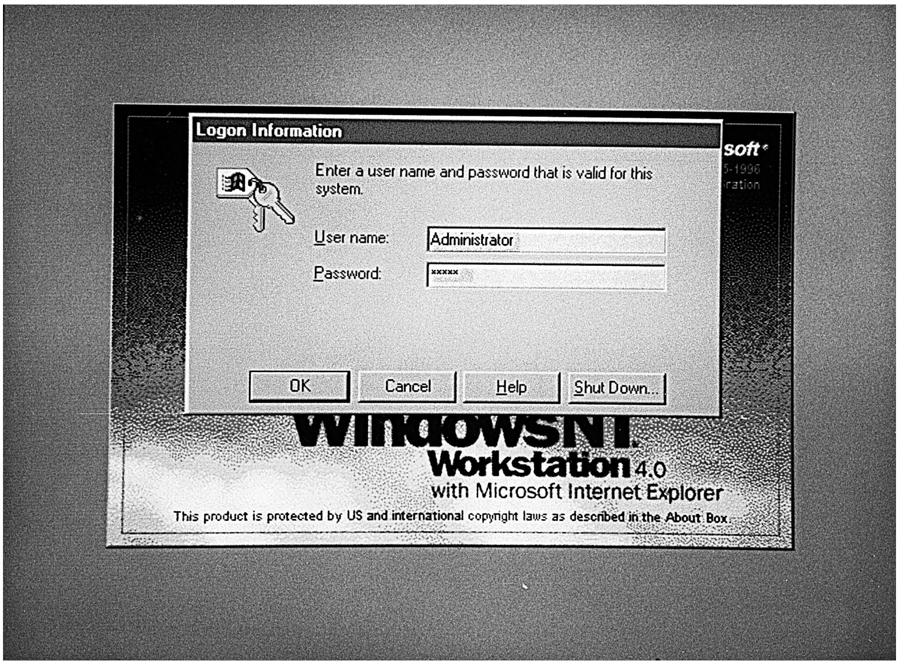
Begin Logon

Press Ctrl + Alt + Delete to log on

Microsoft
© 1985-1996
Corporation
Microsoft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(9) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

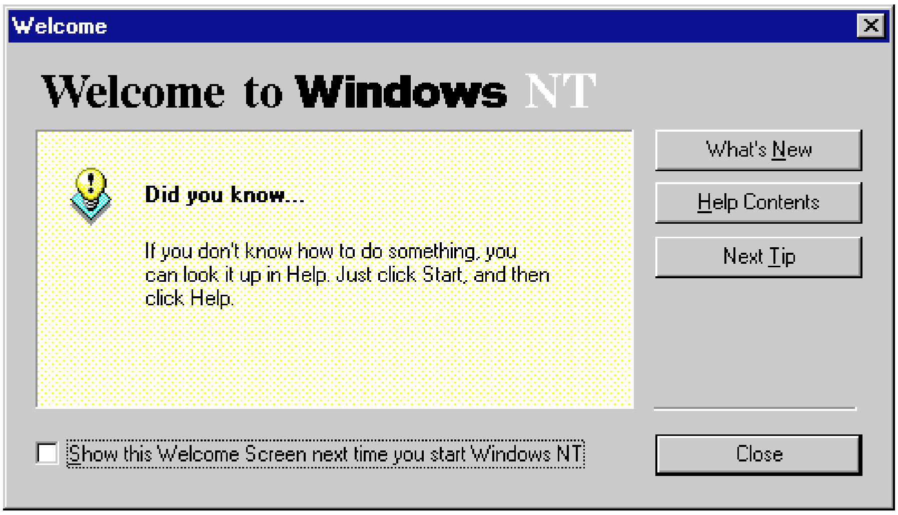
OK
Cancel
Help
Shut Down...
soft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(10) Type “`pc-ps`” in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the [Welcome to Windows NT] message appears.



Welcome

Welcome to Windows NT

Did you know...

If you don't know how to do something, you can look it up in Help. Just click Start, and then click Help.

☐ Show this Welcome Screen next time you start Windows NT

What's New
Help Contents
Next Tip
Close

(11) To inhibit the reappearance of the [Welcome to Windows NT] message, remove the check mark from the checkbox [Show this Welcome Screen next time you start Windows NT] in the bottom left-hand corner of the screen, then click [Close].

→ The Windows NT desktop appears.

8.4 Installing the Video Driver

◆ NOTE ◆

Execute either "■ Installing the Video Driver for a GX1 Series Control Unit" or "■ Installing the Video Driver for a GX110 Series Control Unit" shown below according to the model of control unit (DELL OptiPlex GX1 Series or GX110 Series).

■ Installing the Video Driver for a GX1 Series Control Unit

● The following will be required for the installation;

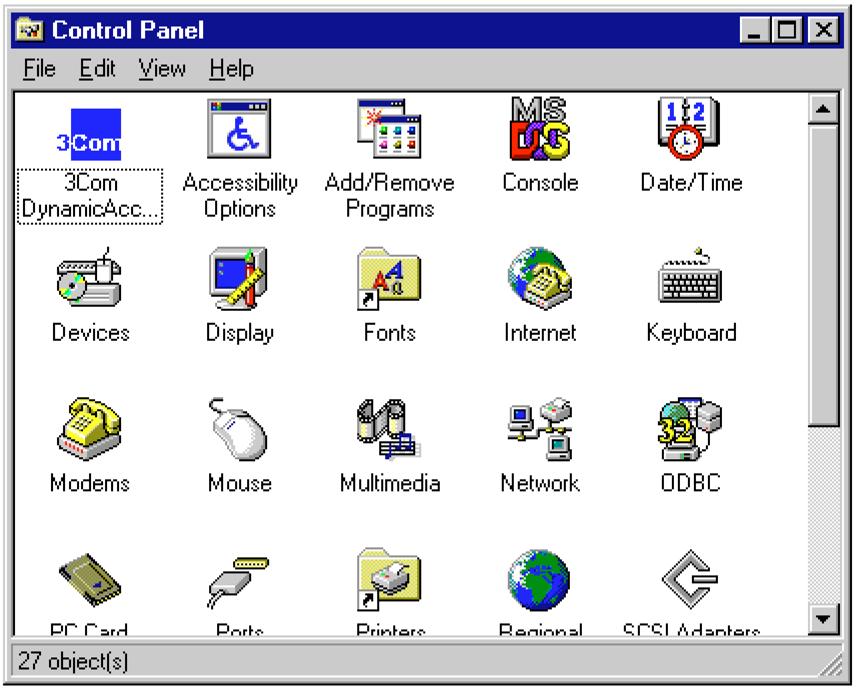
- ATI 3D RAGE PRO Video Drivers disk
  (For a GX1 series control unit).. X 1

CAUTION

Ensure that the install disk is write-protected (write-disabled).

(1) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

→ The [Control Panel] window appears.

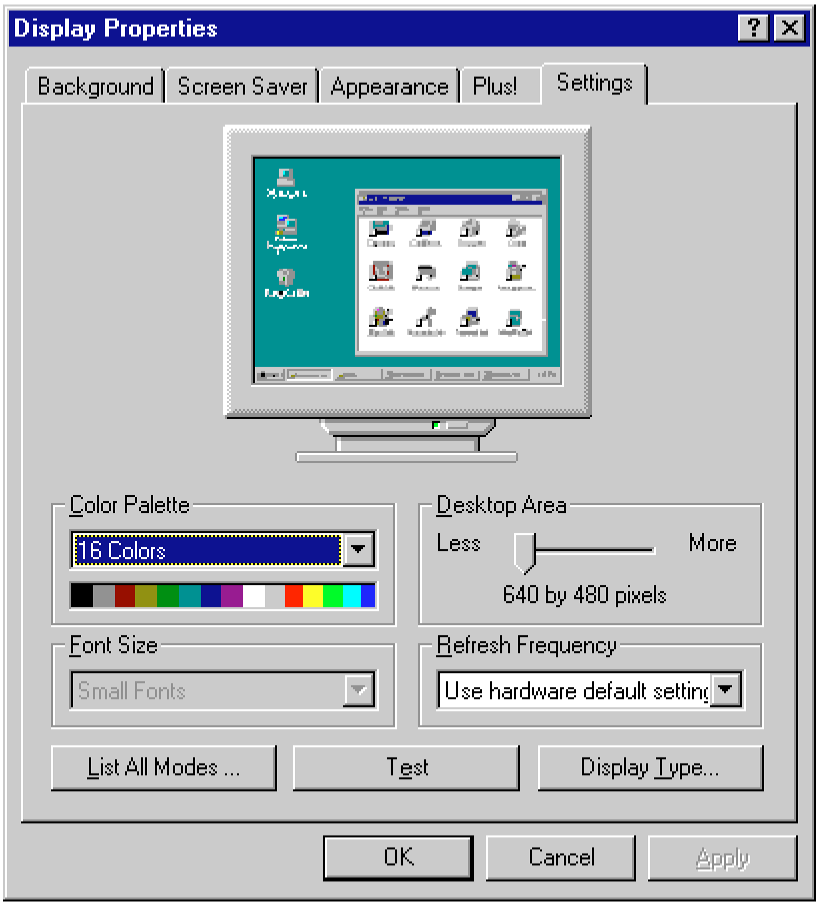

Control Panel
File Edit View Help
3Com DynamicAcc...
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Display
Fonts
Internet
Keyboard
Modems
Mouse
Multimedia
Network
ODBC
PC Card
Ports
Printers
Regional
SCSI Adapters
27 object(s)

(2) Double-click the [Display] icon.

→ The [Display Properties] window appears.

(3) Click the [Settings] tab.

→ The [Settings] window appears.


Display Properties
Background
Screen Saver
Appearance
Plus!
Settings
Less
More
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

Color Palette: 16 Colors

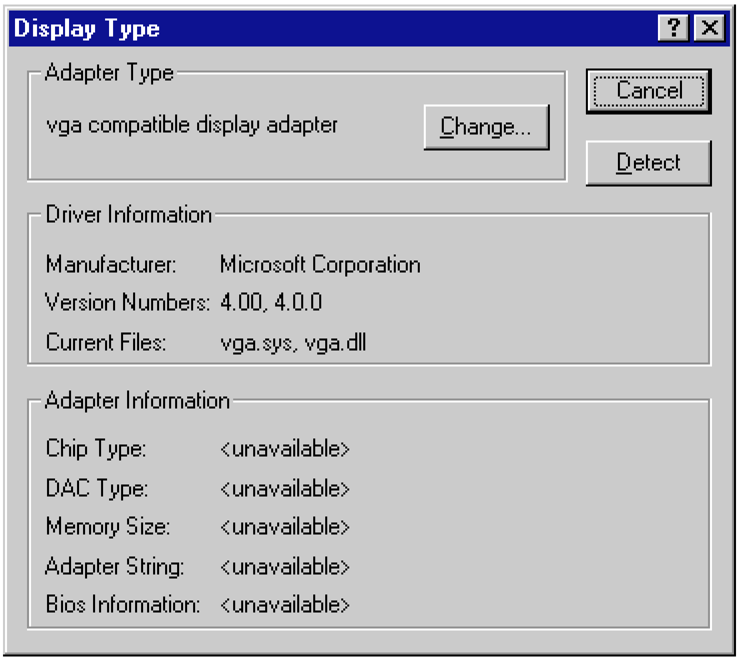
Desktop Area: 640 by 480 pixels

Font Size: Small Fonts

Refresh Frequency: Use hardware default settinç

(4) Click [Display Type...].

→ The [Display Type] window appears.


Display Type
Cancel
Change...
Detect

Adapter Type

vga compatible display adapter

Driver Information

Manufacturer: Microsoft Corporation

Version Numbers: 4.00, 4.0.0

Current Files: vga.sys, vga.dll

Adapter Information

Chip Type: <unavailable>

DAC Type: <unavailable>

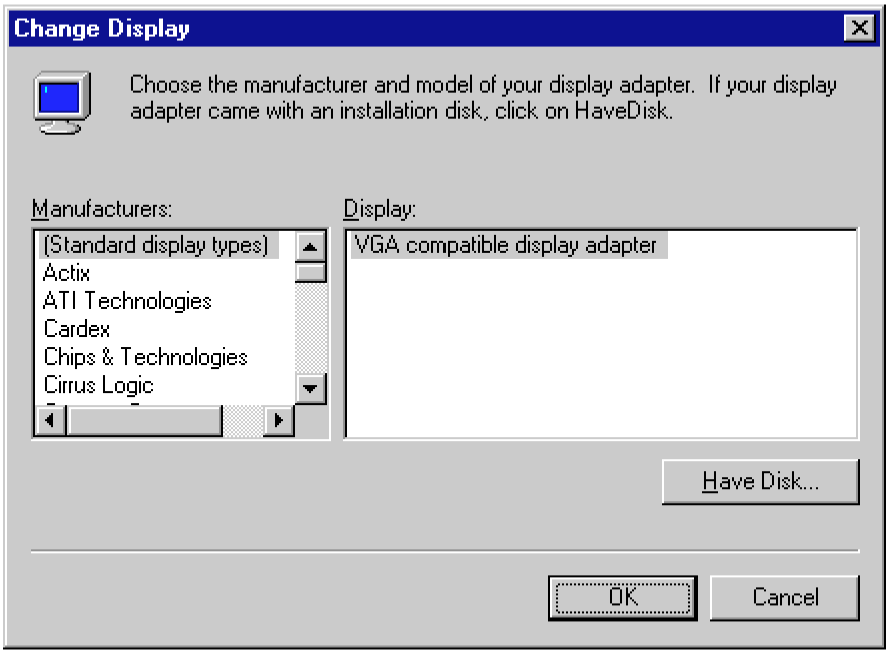
Memory Size: <unavailable>

Adapter String: <unavailable>

Bios Information: <unavailable>

(5) Click [Change...].

→ The [Change Display] window appears.



Change Display

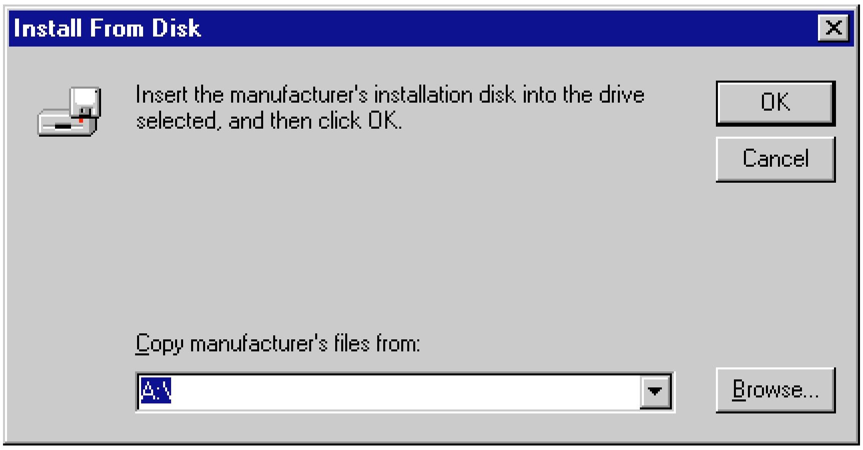
Choose the manufacturer and model of your display adapter. If your display adapter came with an installation disk, click on HaveDisk.

Manufacturers:
- (Standard display types)
- Actix
- ATI Technologies
- Cardex
- Chips & Technologies
- Cirrus Logic

Display:
- VGA compatible display adapter

(6) Click [Have Disk...].

→ The [Install From Disk] dialog appears.



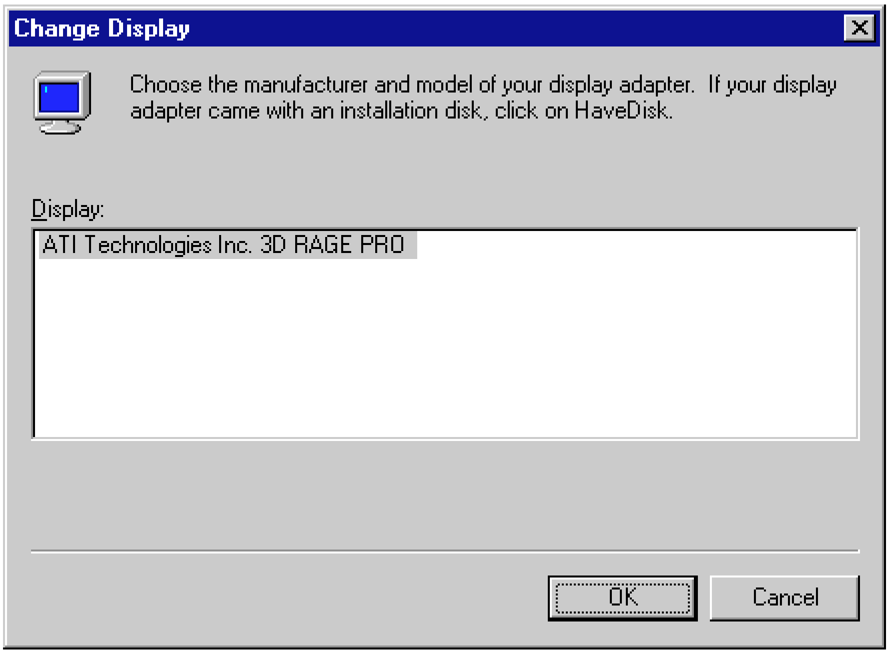
Install From Disk

Insert the manufacturer's installation disk into the drive selected, and then click OK.

Copy manufacturer's files from: A:\

(7) Insert the disk labeled "ATI 3D RAGE PRO Video Drivers" into the floppy disk drive, and click [OK].

→ The [Change Display] window reappears.



Change Display

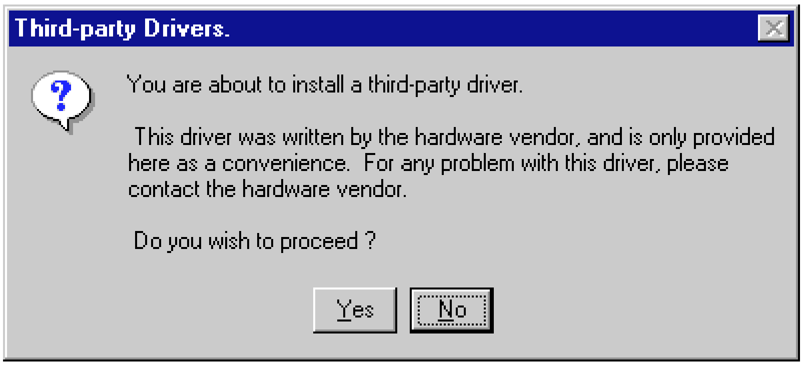
Choose the manufacturer and model of your display adapter. If your display adapter came with an installation disk, click on HaveDisk.

Display:

ATI Technologies Inc. 3D RAGE PRO

(8) Check that the "ATI Technologies Inc. 3D RAGE PRO" display adapter is displayed and selected in the [Display:] List, and click [OK].

→ The [Third-party Drivers] message appears prompting to choose a Yes or No for installing the driver.



Third-party Drivers.

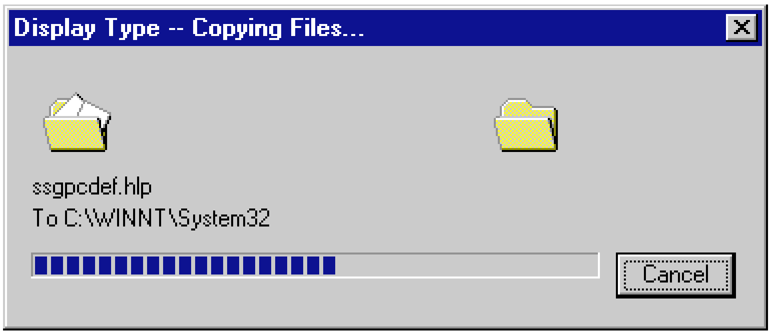
You are about to install a third-party driver.

This driver was written by the hardware vendor, and is only provided here as a convenience. For any problem with this driver, please contact the hardware vendor.

Do you wish to proceed ?

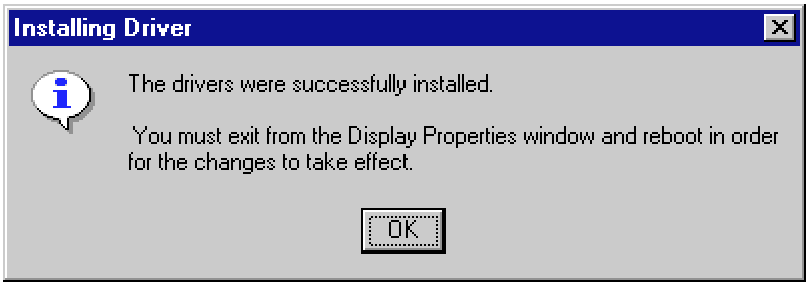
(9) Click [Yes].

→ The installation process begins.



ssgpcdef.hlp
To C:\WINNT\System32

→ When the installation has been successfully completed, the following message appears indicating the successful installation.



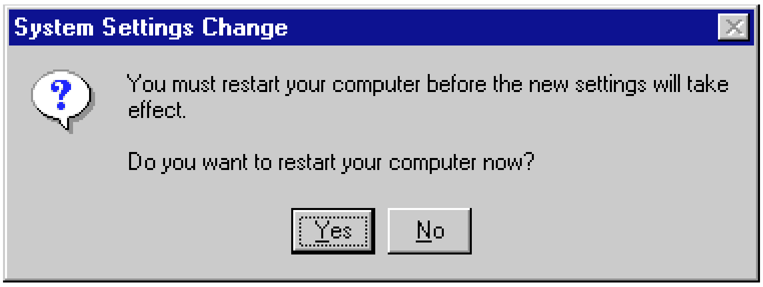
The drivers were successfully installed.

You must exit from the Display Properties window and reboot in order for the changes to take effect.

(10) Click [OK].

(11) Close the [Display Type] and [Display Properties] windows by clicking [Close] on them.

→ The [System Settings Change] message appears prompting to choose a Yes or No for validating the system settings.

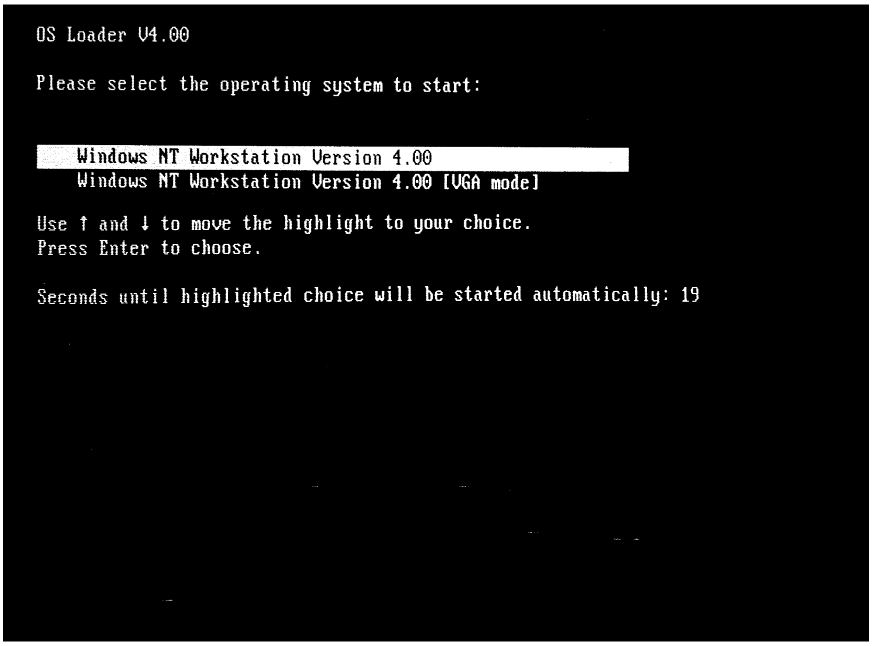


You must restart your computer before the new settings will take effect.

Do you want to restart your computer now?

(12) Remove the floppy disk from the drive and click [Yes].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



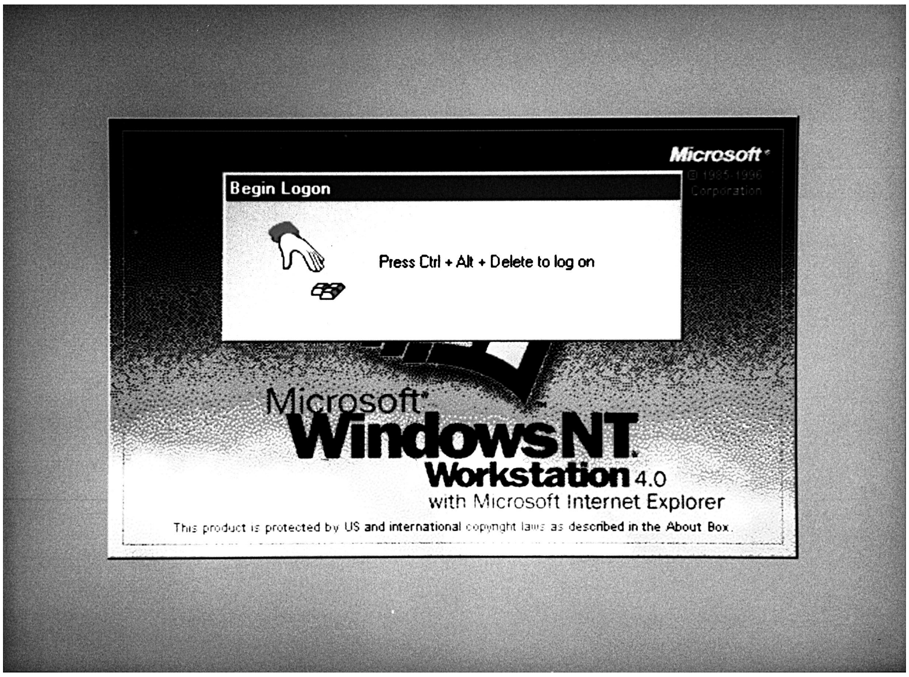
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(13) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] window appears.



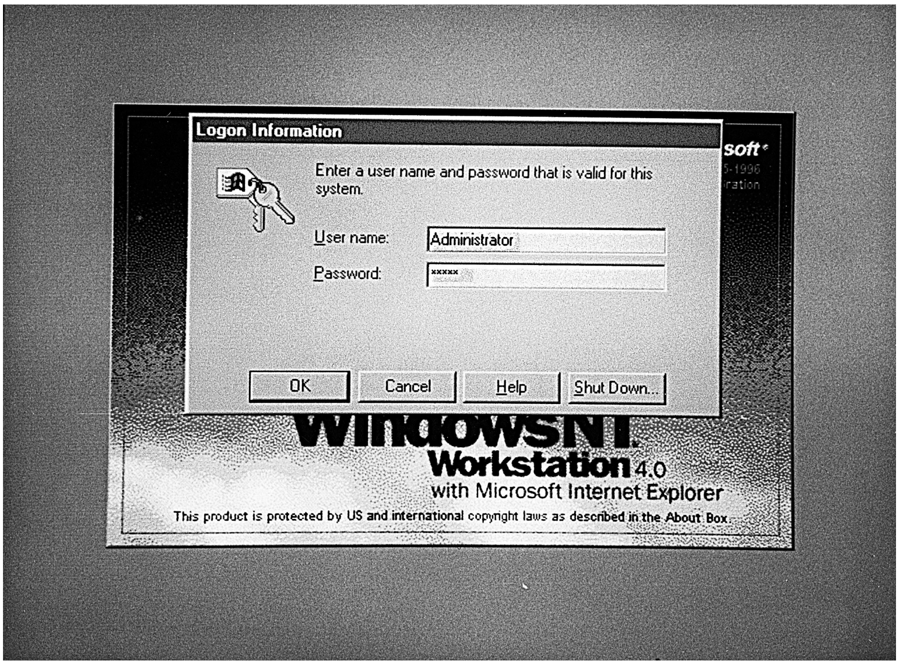
Microsoft
© 1985-1996
Corporation
Begin Logon
Microsoft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer

Press Ctrl + Alt + Delete to log on

This product is protected by US and international copyright laws as described in the About Box.

(14) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

OK
Cancel
Help
Shut Down...
soft
WindowsNT.
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(15) Type “`pc-ps`” in the [Password:] and click [OK].

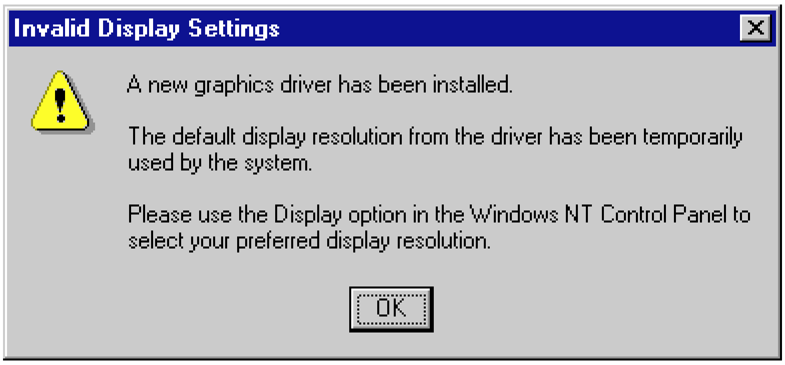
CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the [Control Panel] window appears.

(16) Close the [Control Panel] window.

→ The [Invalid Display Settings] alert appears.



Invalid Display Settings

A new graphics driver has been installed.

The default display resolution from the driver has been temporarily used by the system.

Please use the Display option in the Windows NT Control Panel to select your preferred display resolution.

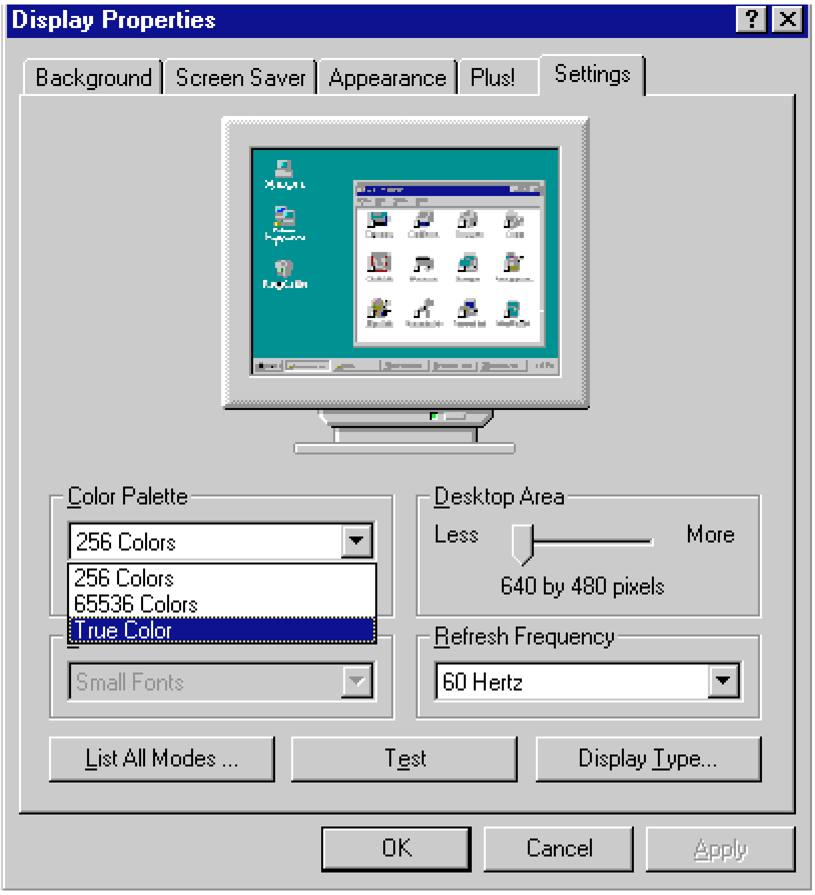
(17) Click [OK].

→ The [Display Properties] window appears.

(18) Click the [Settings] tab.

→ The [Settings] window appears.

(19) Select the “True Color” option from the [Color Palette] drop-down list.



Display Properties

Color Palette: 256 Colors

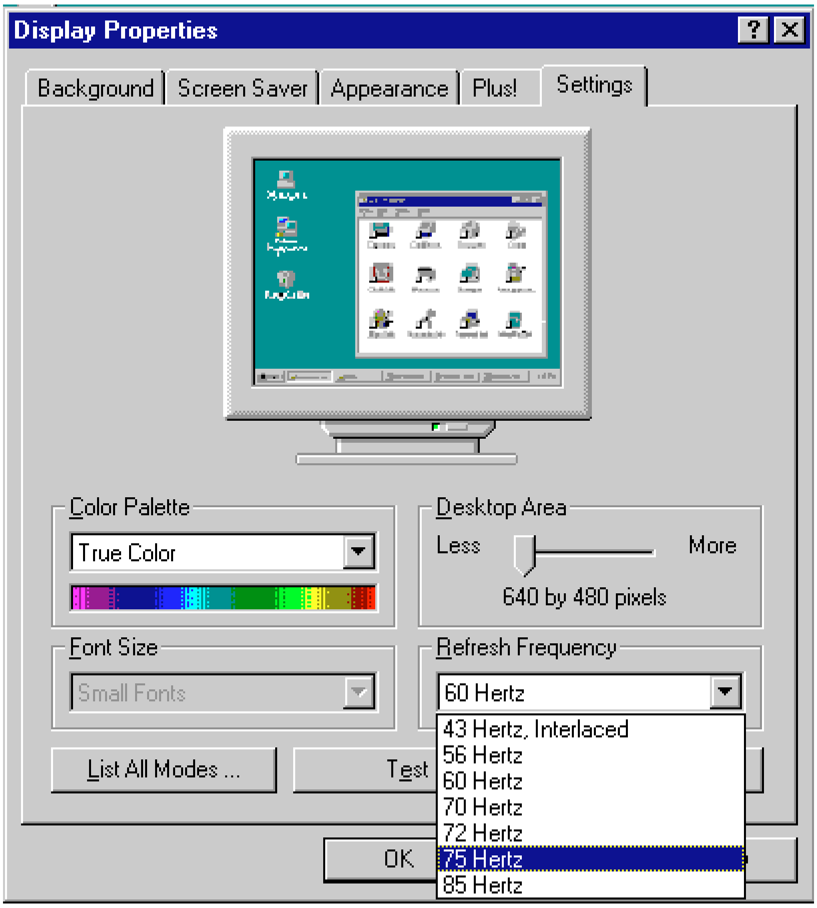
256 Colors
65536 Colors
True Color

Desktop Area: 640 by 480 pixels

Refresh Frequency: 60 Hertz

?
Background
Screen Saver
Appearance
Plus!
Settings
Less
More
Small Fonts
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(20) Select the “75 Hertz” option from the [Refresh Frequency] drop-down list. However, [Desktop area] remains 640 by 480 pixels.



Display Properties
Background
Screen Saver
Appearance
Plus!
Settings
List All Modes ...
Test
OK

Color Palette: True Color

Font Size: Small Fonts

Desktop Area: Less — More

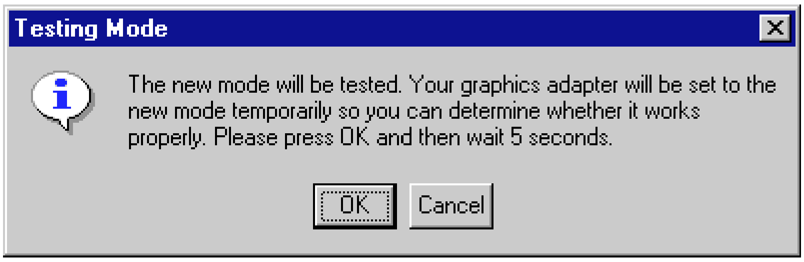
640 by 480 pixels

Refresh Frequency: 60 Hertz

43 Hertz, Interlaced
56 Hertz
60 Hertz
70 Hertz
72 Hertz
75 Hertz
85 Hertz

(21) Click [Test].

→ The [Testing Mode] information appears.

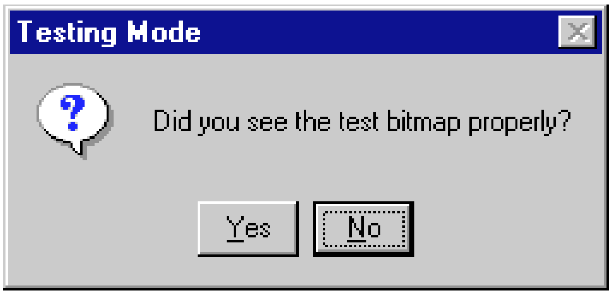


Testing Mode

The new mode will be tested. Your graphics adapter will be set to the new mode temporarily so you can determine whether it works properly. Please press OK and then wait 5 seconds.

(22) Click [OK].

→ The test bit map is displayed for five seconds. Then, the following message appears prompting to choose a Yes or No for the correct display.



Testing Mode

Did you see the test bitmap properly?

(23) Click [Yes].

(24) Click [OK] on the [Display Properties] window.

→ The Windows NT desktop reappears.

■ Installing the Video Driver for a GX110 Series Control Unit

● The following will be required for the installation;

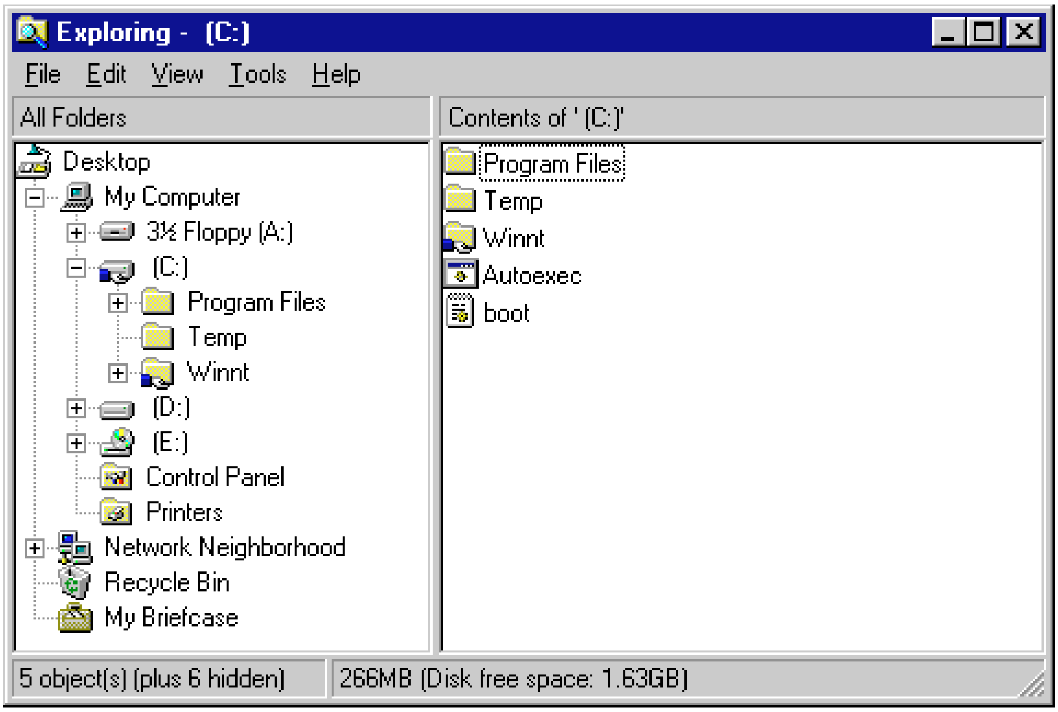
- Intel 810/810e Video Driver for Windows NT 4.0 Disk 1 to 5 (for a GX110 series control unit) .... X 5

CAUTION

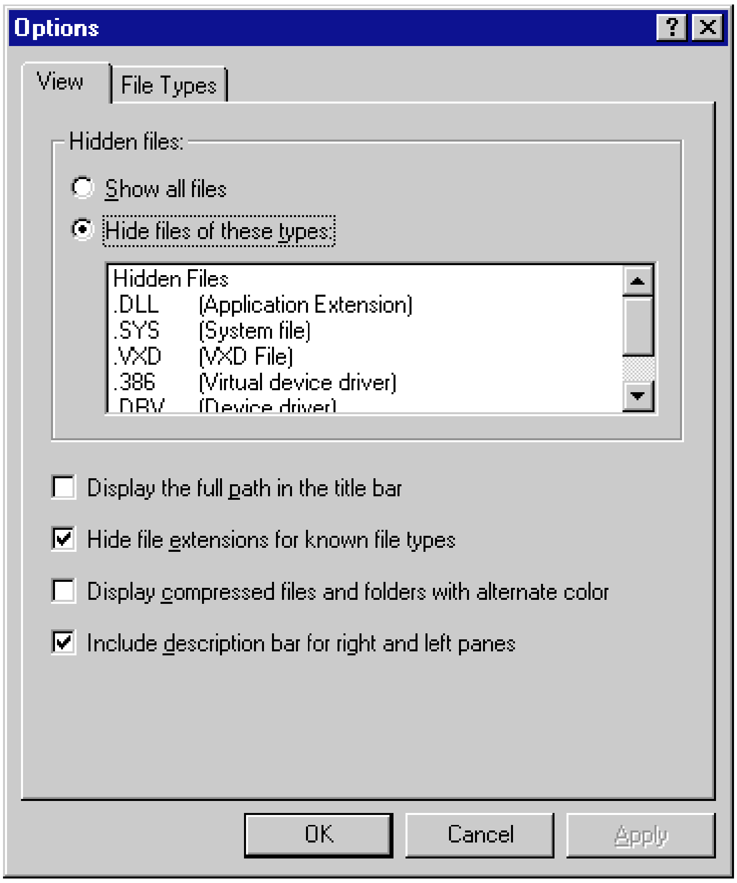
Ensure that the install disk is write-protected (write-disabled).

(1) From the [Start] menu on the Windows NT desktop, click [Programs] and then [Windows NT Explorer].

→ The [Exploring - (C:)] window appears.


Exploring - (C:)
File Edit View Tools Help
All Folders
Contents of '(C:)'
Desktop
My Computer
3½ Floppy (A:)
(C:)
Program Files
Temp
Winnt
(D:)
(E:)
Control Panel
Printers
Network Neighborhood
Recycle Bin
My Briefcase
Program Files
Temp
Winnt
Autoexec
boot
5 object(s) (plus 6 hidden)
266MB (Disk free space: 1.63GB)

(2) From the [View] menu on the [Exploring - (C:)] window, click [Options...].
→ The [Options] window appears.



○ Show all files

● Hide files of these types:

Hidden Files
.DLL (Application Extension)
.SYS (System file)
.VXD (VXD File)
.386 (Virtual device driver)
.DRV (Device driver)

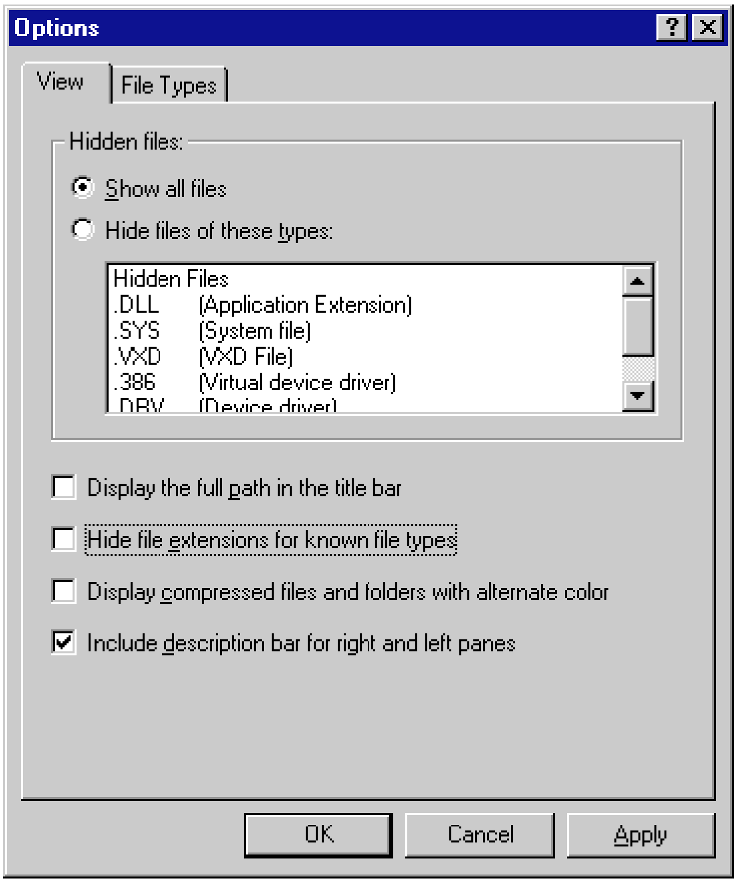
☐ Display the full path in the title bar

☑ Hide file extensions for known file types

☐ Display compressed files and folders with alternate color

☑ Include description bar for right and left panes

(3) Select [Show all files] for the [Hidden files:] setting, and remove the check mark from the [Hide the extensions for known file types] check box on the [View] window.


Options
View
File Types
OK
Cancel
Apply

Hidden files:

● Show all files

○ Hide files of these types:

Hidden Files	
.DLL	(Application Extension)
.SYS	(System file)
.VXD	(VXD File)
.386	(Virtual device driver)
.DRV	(Device driver)

☐ Display the full path in the title bar

☐ Hide file extensions for known file types

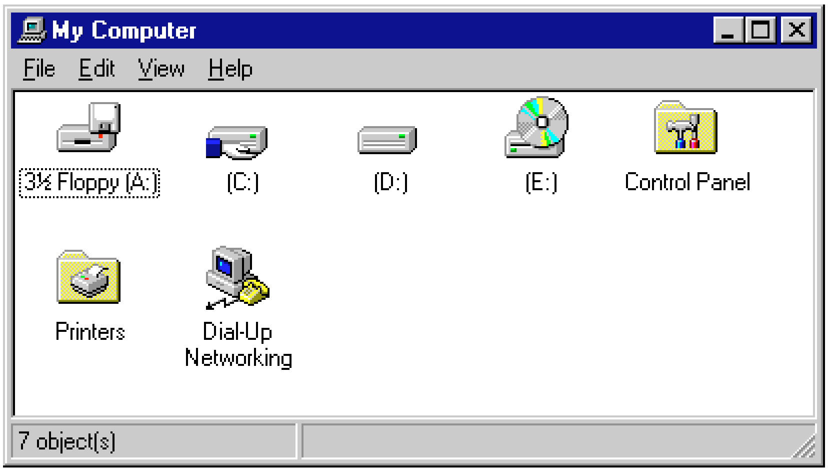
☐ Display compressed files and folders with alternate color

☑ Include description bar for right and left panes

(4) Click [OK] on the [Options] window.

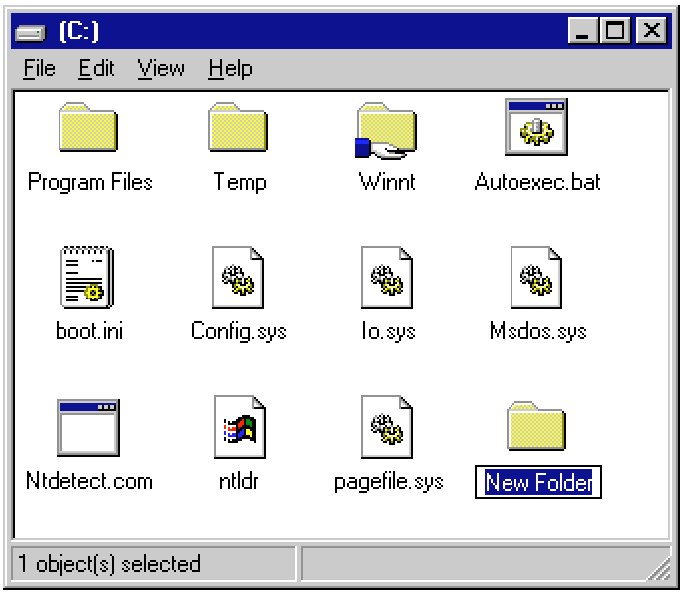
(5) Close the [Exploring - (C:)] window.

(6) Double-click the [My Computer] icon on the Windows NT desktop.
→ The [My Computer] window appears.

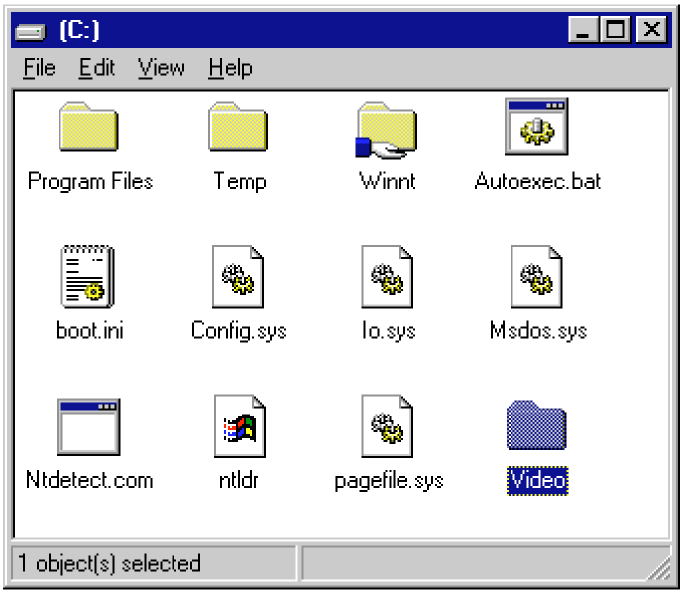

My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
(E:)
Control Panel
Printers
Dial-Up Networking
7 object(s)

(7) Double-click the [(C:)] icon.
→ The [(C:)] window appears.

(8) From the [File] menu on the [(C:)] window, click [New] and then [Folder].
→ The [New Folder] icon appears on the [(C:)] window.


(C:)
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
boot.ini
Config.sys
Io.sys
Msdos.sys
Ntdetect.com
ntldr
pagefile.sys
New Folder
1 object(s) selected

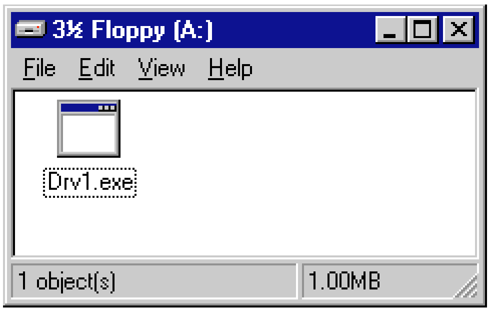
(9) Change the name of the [New Folder] Icon to “Video”.


(C:)
File Edit View Help
Program Files
Temp
Winnt
Autoexec.bat
boot.ini
Config.sys
Io.sys
Msdos.sys
Ntdetect.com
ntldr
pagefile.sys
Video
1 object(s) selected

(10) Insert the disk labeled “Intel 810/810e Video Driver for Windows NT 4.0 Disk 1” into the floppy disk drive.

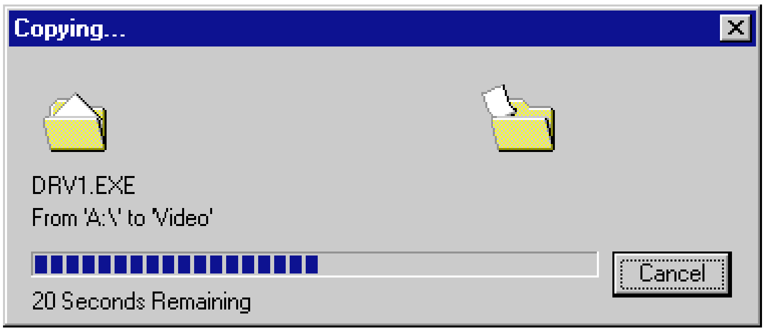
(11) Double-click the [3 1/2 Floppy (A:)] icon on the [My Computer] window.

→ The [3 1/2 Floppy (A:)] window appears, and indicates the file stored in the disk. In case of using the “Disk 1”, the following window appears.



(12) Copy the file in the following procedure. Drag the file icon on the [3 1/2 Floppy (A:)] window to the [Video] folder icon created in the step (9) on the [(C:)] window.

→ The status window [Copying...] appears indicating that file is being copied.



DRV1.EXE
From 'A:\' to 'Video'

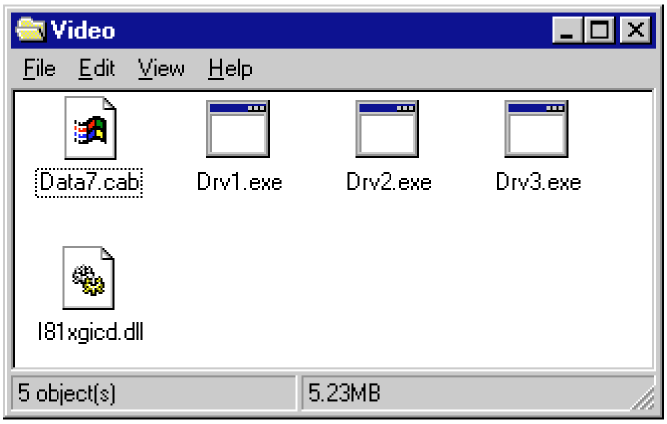
20 Seconds Remaining

(13) When the file copying has been completed, remove the disk from the floppy disk drive. Then repeat the procedure from the step (10) to (12) to copy all files stored in the other four disks (“Disk 2, 3, 4 and 5”) sequentially.

(14) After all files are copied, close the [3 1/2 Floppy (A:)] window, and remove the disk from the floppy disk drive.

(15) Double-click the [Video] folder icon on the [(C:)] window.

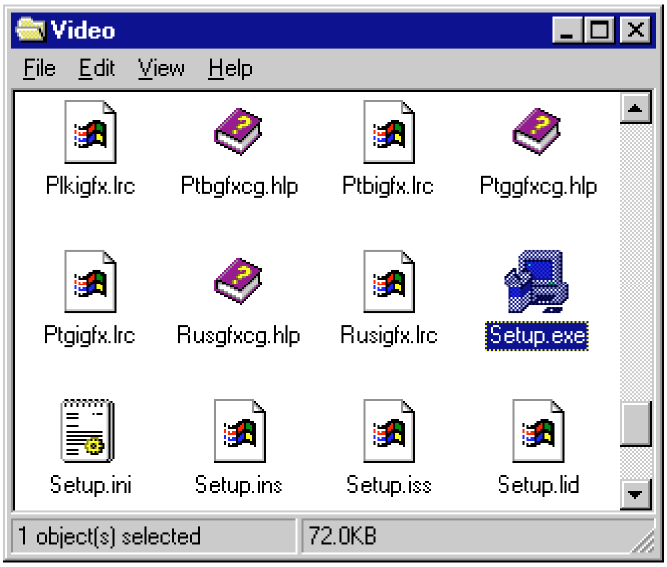
→ The [Video] window appears. When the file copying has been successfully completed, the following five files are indicated.


Video
File Edit View Help
Data7.cab
Drv1.exe
Drv2.exe
Drv3.exe
I81xgicd.dll
5 object(s)
5.23MB

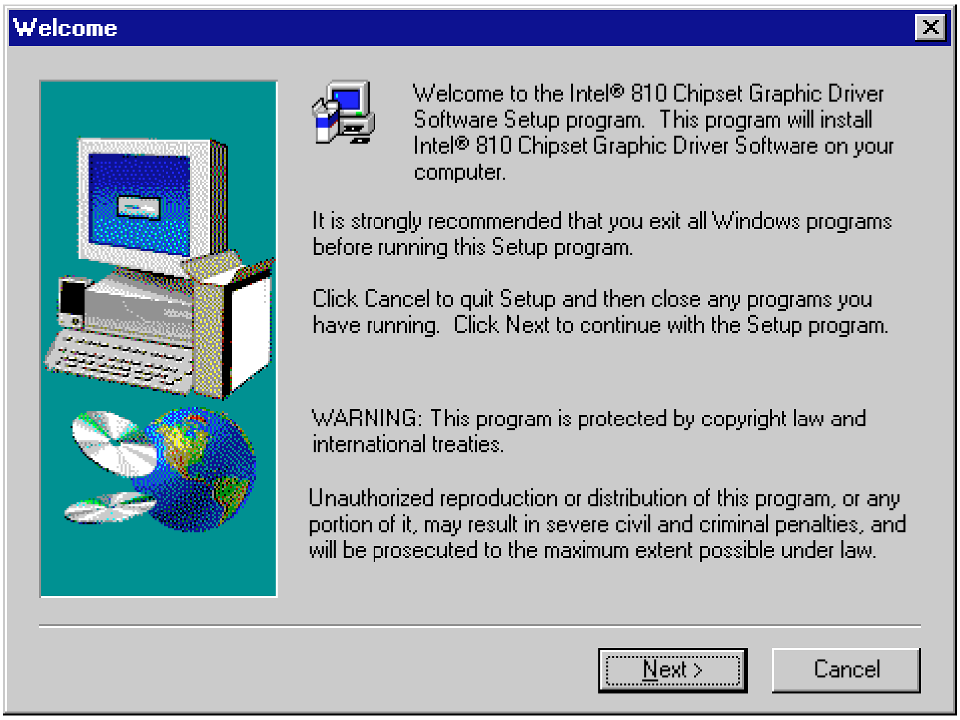
(16) Double-click the [Drv1.exe], [Drv2.exe] and [Drv3.exe] file icons sequentially to execute.

→ The any number of new files created by executes the each exe-files are added on the [Video] window.

(17) Double-click the [Setup.exe] file icon from among the files created in the step (16) on the [Video] window.


Video
File Edit View Help
Plkigfx.lrc
Ptbgfxcg.hlp
Ptbigfx.lrc
Ptggfxcg.hlp
Ptgigfx.lrc
Rusgfxcg.hlp
Rusigfx.lrc
Setup.exe
Setup.ini
Setup.ins
Setup.iss
Setup.lid
1 object(s) selected
72.0KB

→ The setup process begins, and the Setup Wizard appears.



Welcome to the Intel® 810 Chipset Graphic Driver Software Setup program. This program will install Intel® 810 Chipset Graphic Driver Software on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

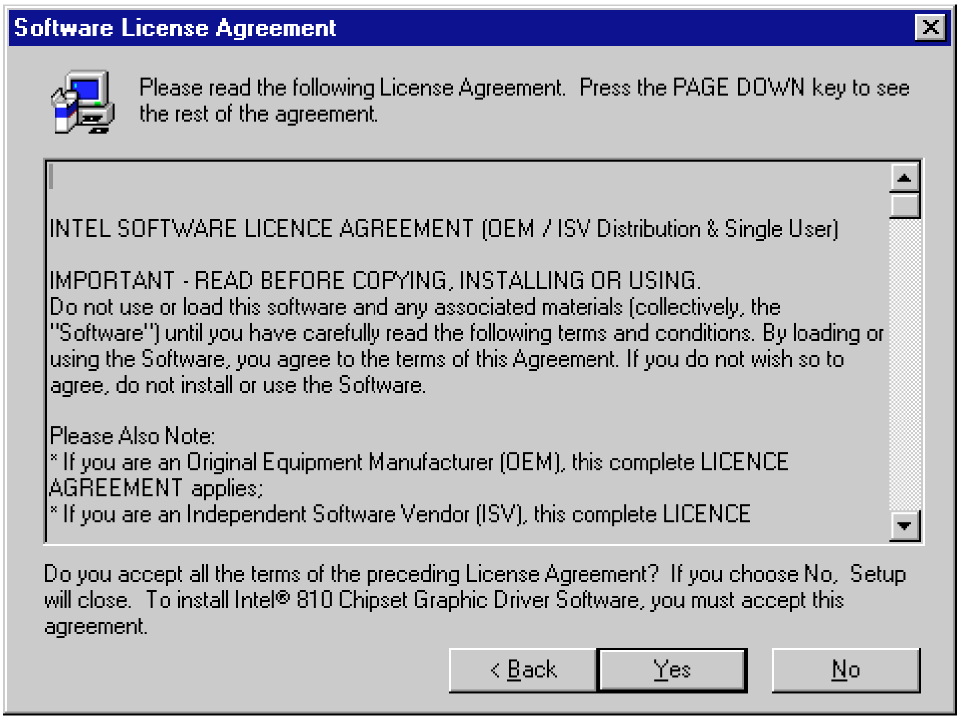
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(18) Click [Next>].

→ The [Software License Agreement] message appears.



Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

INTEL SOFTWARE LICENCE AGREEMENT (OEM / ISV Distribution & Single User)

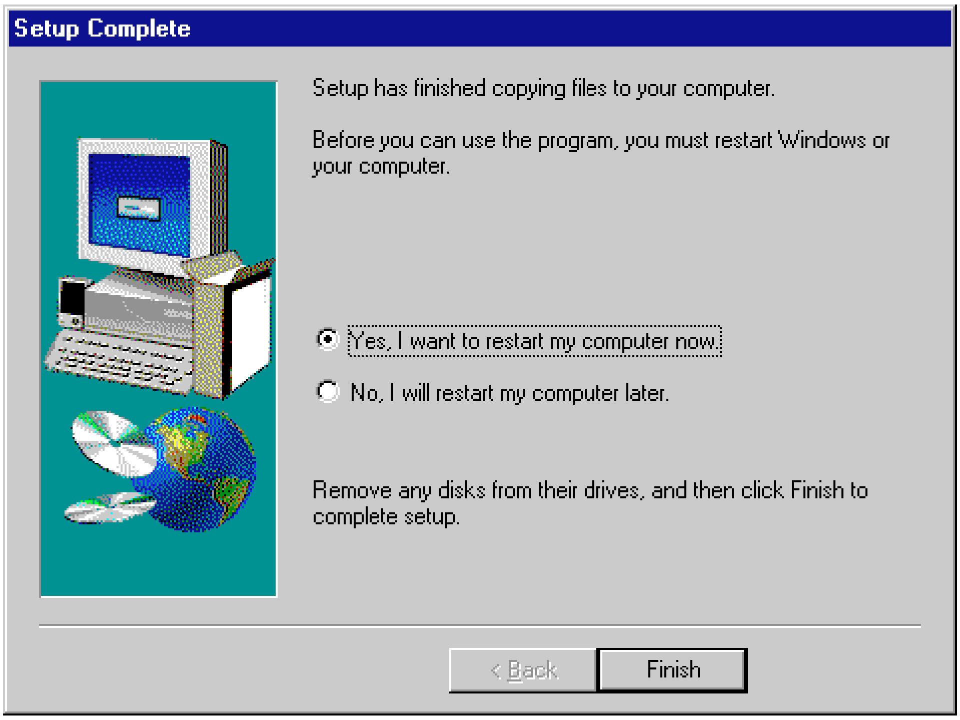
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish so to agree, do not install or use the Software.

Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), this complete LICENCE AGREEMENT applies;
* If you are an Independent Software Vendor (ISV), this complete LICENCE

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Intel® 810 Chipset Graphic Driver Software, you must accept this agreement.

(19) Click [Yes].

→ The Video Driver Software installation begins. When the installation has been successfully completed, the following window appears prompting to choose a Yes or No for restarting the computer.



Setup Complete

Setup has finished copying files to your computer.

Before you can use the program, you must restart Windows or your computer.

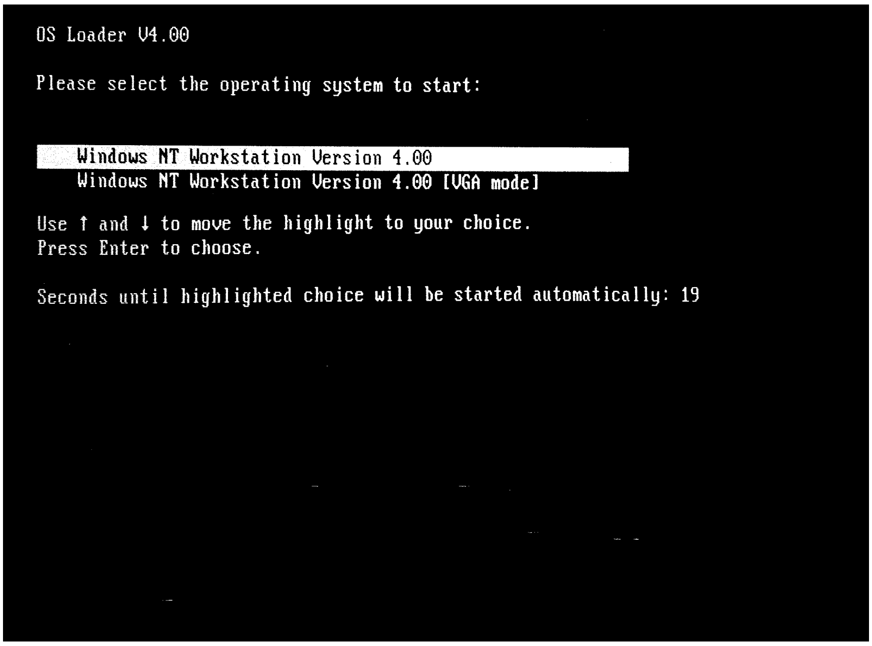
● Yes, I want to restart my computer now.

○ No, I will restart my computer later.

Remove any disks from their drives, and then click Finish to complete setup.

(20) Make sure no disk in the respective drives of the control unit and check that the [Yes, I want to restart my computer now.] option is selected, then click [Finish].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



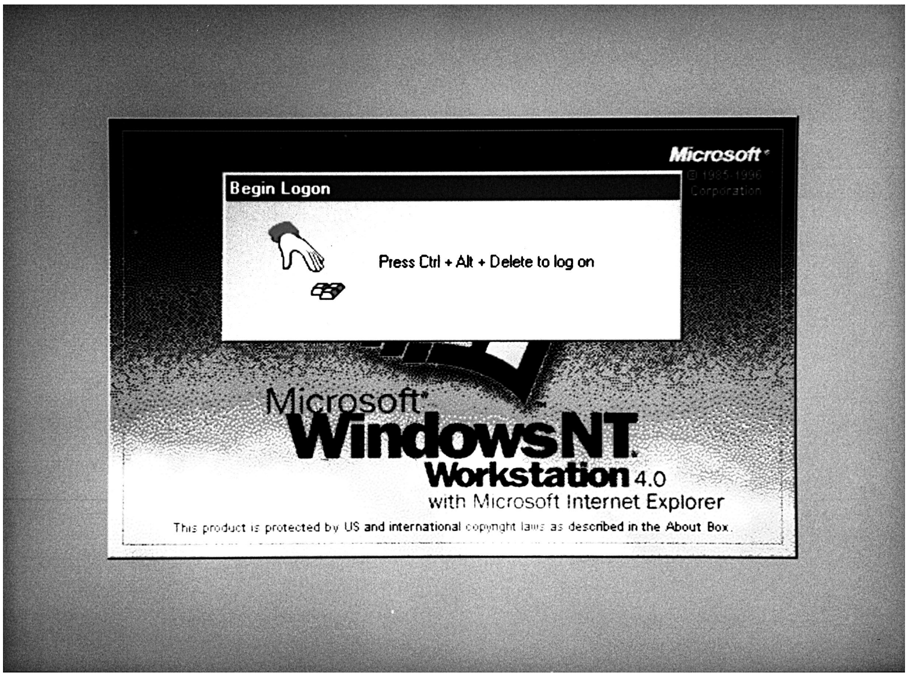
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(21) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



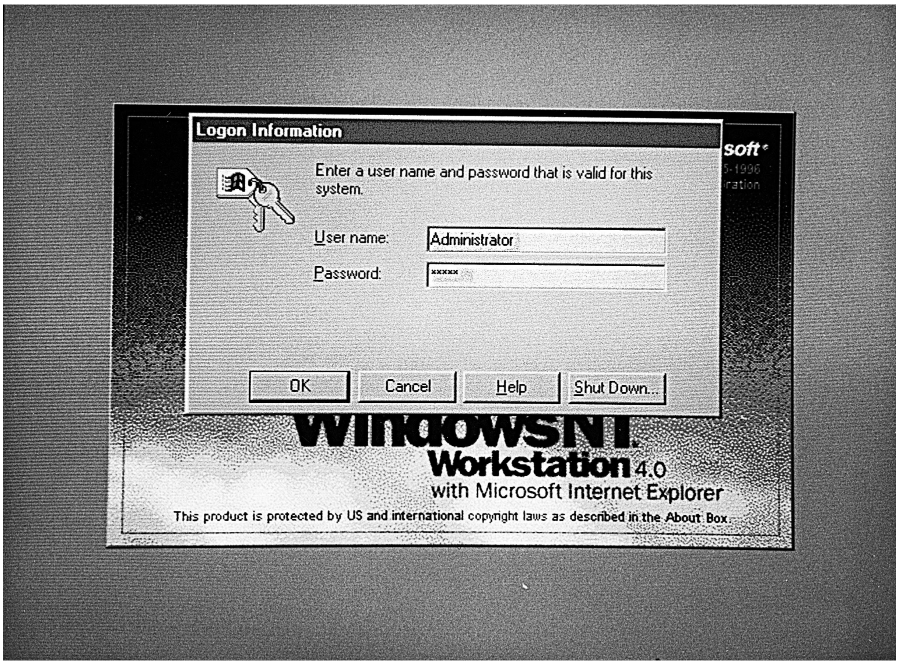
Begin Logon

Press Ctrl + Alt + Delete to log on

Microsoft
© 1985-1996
Corporation
Microsoft
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(22) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

OK
Cancel
Help
Shut Down...
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(23) Type “`pc-ps`” in the [Password:] and click [OK] .

CAUTION

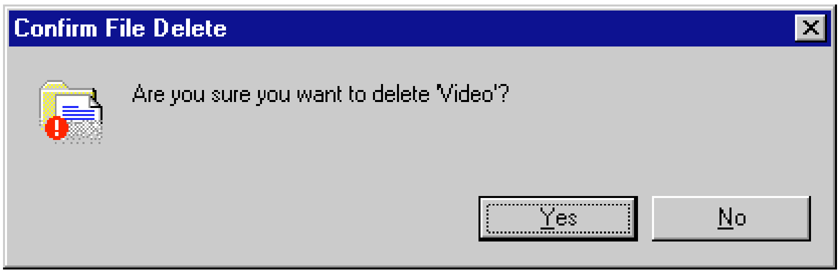
Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT. The [My Computer] window, the [(C:)] window and the [Video] window appear.

(24) Drag the [Video] folder icon on the [(C:)] window to the [Recycle Bin] icon for deleting.

(25) Right-click the [Recycle Bin] icon, then click [Empty Recycle Bin] from the pop-up menu.

→ The [Confirm File Delete] alert appears.



Confirm File Delete

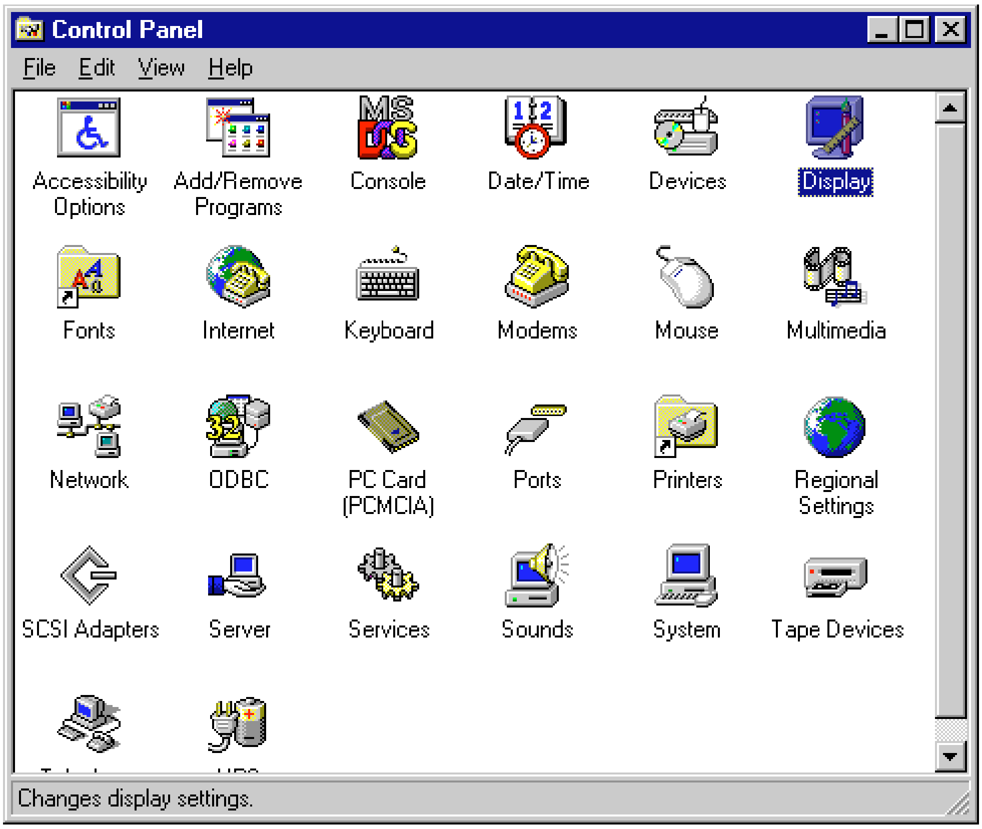
Are you sure you want to delete 'Video'?

(26) Click [Yes].

(27) Close the [(C:)] window and the [My Computer] window.

(28) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

→ The [Control Panel] window appears.


Control Panel
File Edit View Help
Accessibility Options
Add/Remove Programs
Console
Date/Time
Devices
Display
Fonts
Internet
Keyboard
Modems
Mouse
Multimedia
Network
ODBC
PC Card (PCMCIA)
Ports
Printers
Regional Settings
SCSI Adapters
Server
Services
Sounds
System
Tape Devices

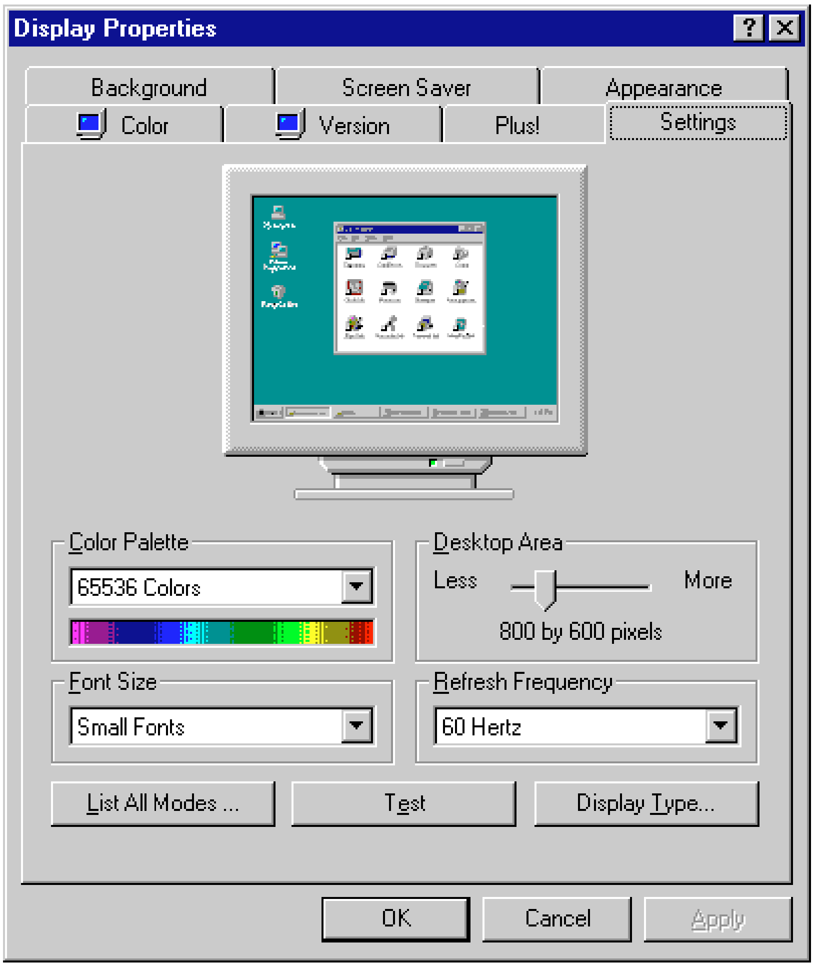
Changes display settings.

(29) Double-click the [Display] icon.

→ The [Display Properties] window appears.

(30) Click the [Settings] tab.

→ The [Settings] window appears.



Display Properties
Background
Screen Saver
Appearance
Color
Version
Plus!
Settings
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

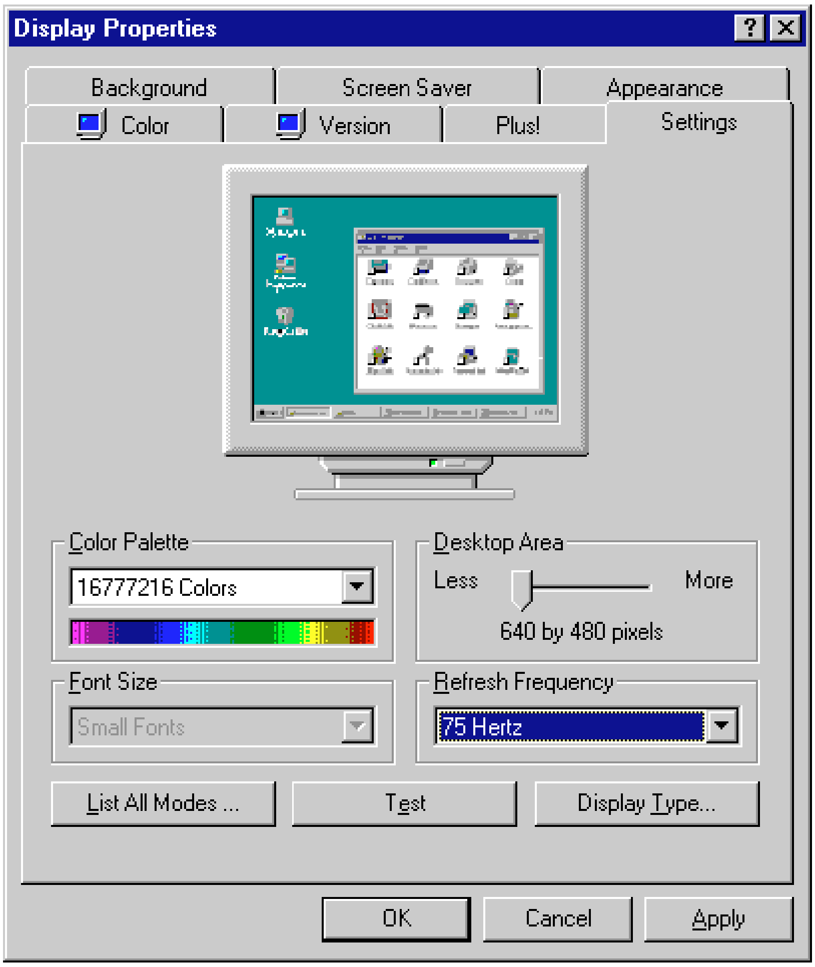
Color Palette: 65536 Colors

Desktop Area: Less More 800 by 600 pixels

Font Size: Small Fonts

Refresh Frequency: 60 Hertz

(31) Select the “16777216 Colors” option from the [Color Palette] drop-down list, the “75 Hertz” option from the [Refresh Frequency] drop-down list, and set the “640 by 480 pixels” for the [Desktop Area] setting.



Display Properties

Color Palette: 16777216 Colors

Font Size: Small Fonts

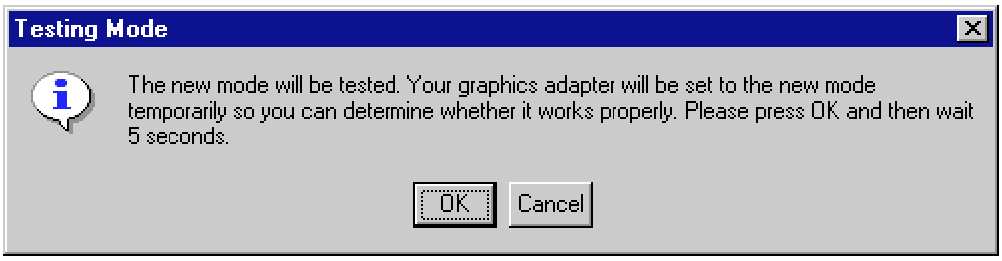
Desktop Area: Less — More, 640 by 480 pixels

Refresh Frequency: 75 Hertz

Background
Screen Saver
Appearance
Color
Version
Plus!
Settings
List All Modes ...
Test
Display Type...
OK
Cancel
Apply

(32) Click [Test].

→ The [Testing Mode] information appears.

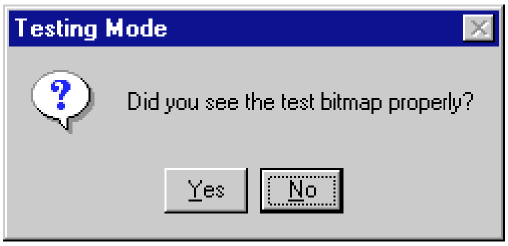


Testing Mode

The new mode will be tested. Your graphics adapter will be set to the new mode temporarily so you can determine whether it works properly. Please press OK and then wait 5 seconds.

(33) Click [OK].

→The test bit map is displayed for five seconds. Then, the following message appears prompting to choose a Yes or No for the correct display.



Testing Mode

Did you see the test bitmap properly?

(34) Click [Yes].

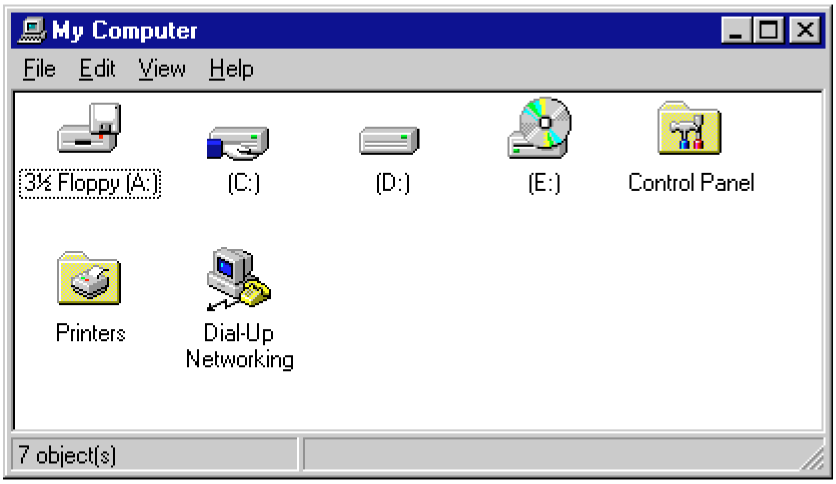
(35) Click [OK] on the [Display Properties] window.

→ The [Control Panel] window reappears.

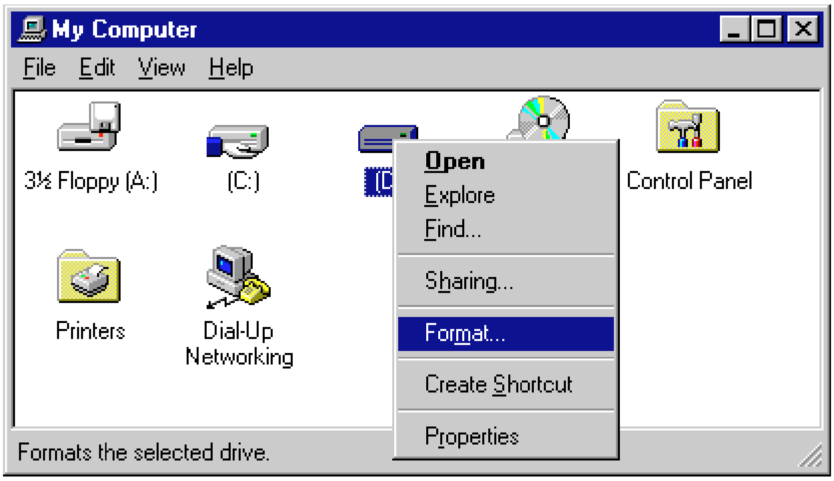
(36) Close the [Control Panel] window.

8.5 Formatting the D Drive

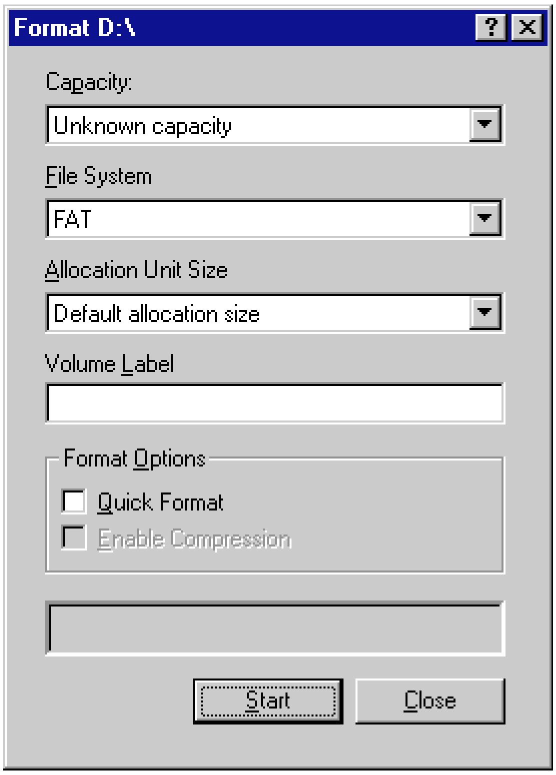
(1) Double-click the [My Computer] icon on the Windows NT desktop.
→ The [My Computer] window appears.


My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D:)
(E:)
Control Panel
Printers
Dial-Up Networking
7 object(s)

(2) Right-click the [(D:)] icon.

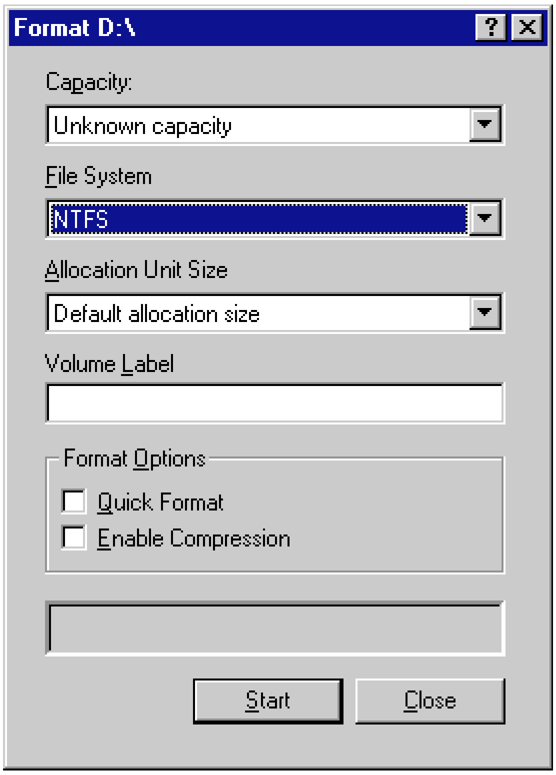

My Computer
File Edit View Help
3½ Floppy (A:)
(C:)
(D
Control Panel
Printers
Dial-Up Networking
Open
Explore
Find...
Sharing...
Format...
Create Shortcut
Properties
Formats the selected drive.

(3) Choose [Format...] from the menu.
→ The [Format D:\] window appears.



Format D:\
?
Capacity:
Unknown capacity
File System
FAT
Allocation Unit Size
Default allocation size
Volume Label
Format Options
☐ Quick Format
☐ Enable Compression
Start
Close

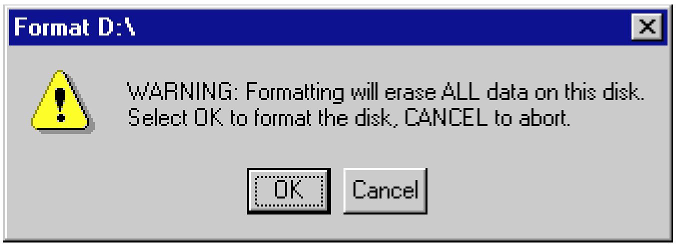
(4) Select “NTFS” from the [File System] drop-down list.



Format D:\
?
Capacity:
Unknown capacity
File System
NTFS
Allocation Unit Size
Default allocation size
Volume Label
Format Options
☐ Quick Format
☐ Enable Compression
Start
Close

(5) Click [Start].

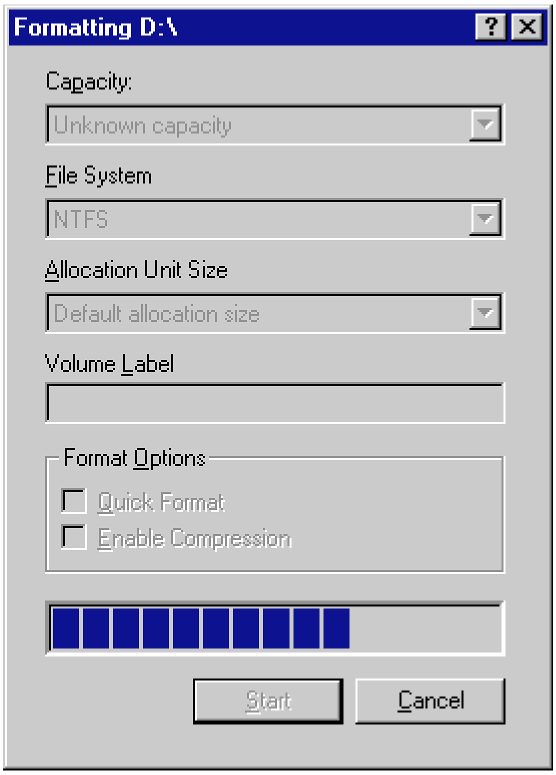
→ The following alert appears prompting to choose a Yes or No for erasing all data on the specified drive.


Format D:\
OK
Cancel

WARNING: Formatting will erase ALL data on this disk.
Select OK to format the disk, CANCEL to abort.

(6) Click [OK].

→ The D: drive is reformatted (Formatting time varies depending on the capacity of the hard disk drive).


Formatting D:\
Format Options
Start
Cancel

Capacity: Unknown capacity

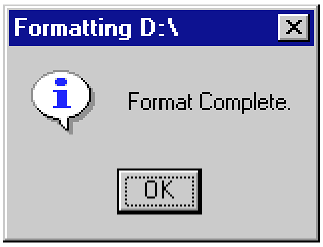
File System: NTFS

Allocation Unit Size: Default allocation size

Volume Label:

☐ Quick Format
☐ Enable Compression

→ Once the formatting has been successfully completed, the following message appears.


Formatting D:\
OK

Format Complete.

(7) Click [OK].

(8) Click [Close] on the [Format D:\] window.
→ The [My Computer] window reappears.

(9) Close the [My Computer] window.

8.6 Installing System Utilities

- The following will be required for the installation;
  - Dell GX1 Utilities Disk
    (For a GX1 series control unit)... X 1
  - OptiPlex System Utilities Version A13
    (For a GX110 series control unit)... X 1

CAUTION

Ensure that the install disk is write-protected (write-disabled).

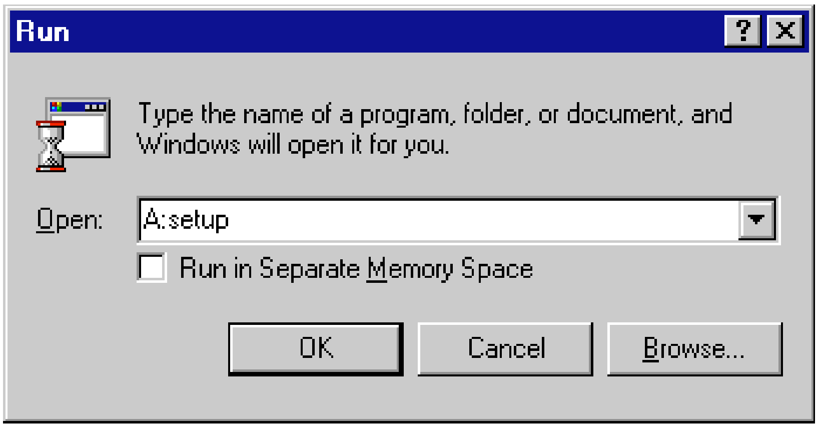
(1) Insert the system utility disk relevant to the control unit model into the floppy disk drive.

- For GX1 series:
  Dell GX1 Utilities
- For GX110 series:
  OptiPlex System Utilities Version A13

(2) From the [Start] menu on the Windows NT desktop, click [Run].

→ The [Run] dialog appears.

(3) Type “`A:setup`” in the [Open:] and click [OK].

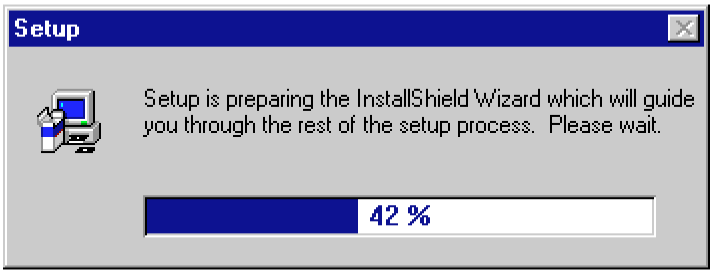


Type the name of a program, folder, or document, and Windows will open it for you.

Open: A:setup

☐ Run in Separate Memory Space

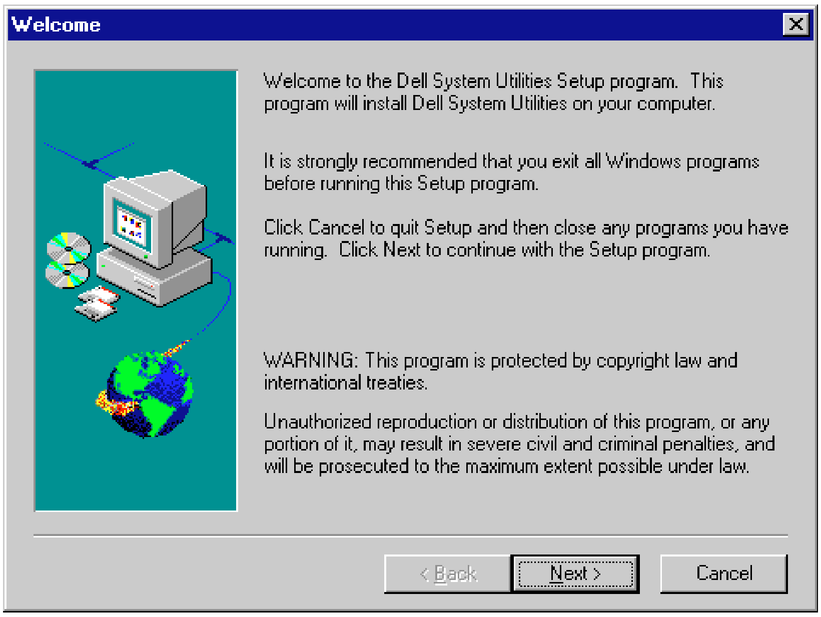
→ The setup process begins automatically.



Setup is preparing the InstallShield Wizard which will guide you through the rest of the setup process. Please wait.

42 %

→ The Setup Wizard appears.



Welcome to the Dell System Utilities Setup program. This program will install Dell System Utilities on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

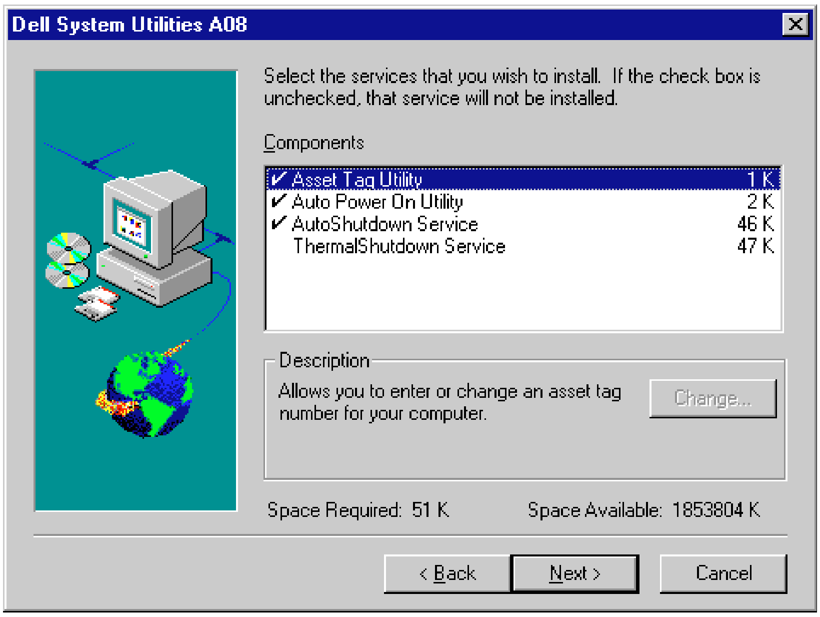
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(4) Click [Next>].

→ The [Dell System Utilities] window appears.



Dell System Utilities A08

Select the services that you wish to install. If the check box is unchecked, that service will not be installed.

Components

☑	Asset Tag Utility	1 K
☑	Auto Power On Utility	2 K
☑	AutoShutdown Service	46 K
☐	ThermalShutdown Service	47 K

Description

Allows you to enter or change an asset tag number for your computer.

Space Required: 51 K

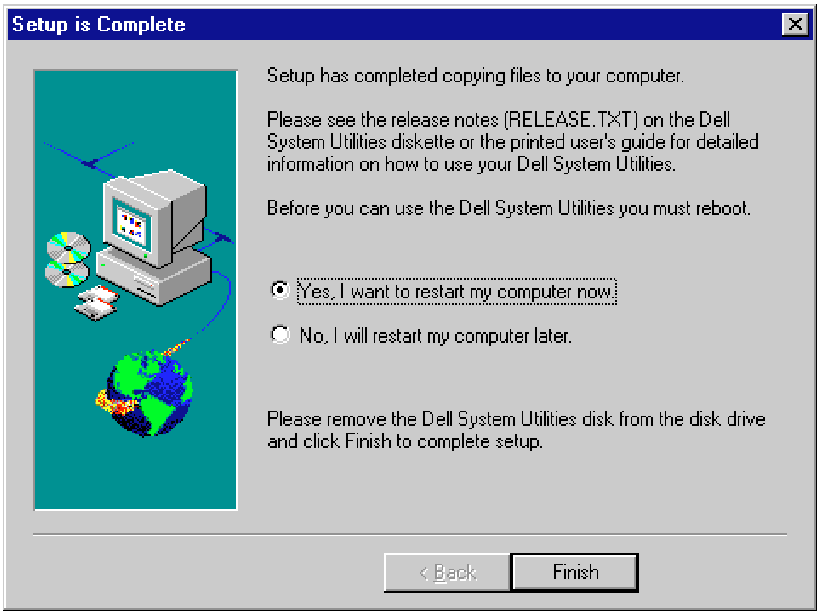
Space Available: 1853804 K

◆ **NOTE** ◆

For a GX110 series control unit, “ThermalShutdown Service” is not displayed in the [Components] list.

(5) Make sure that the “Asset Tag Utility”, “Auto Power On Utility”, and “Auto Shutdown Service” are checked, then click [Next>].

→ Once the installation has been successfully completed, the following window appears prompting to choose a Yes or No for restarting the computer.



Setup is Complete

Setup has completed copying files to your computer.

Please see the release notes (RELEASE.TXT) on the Dell System Utilities diskette or the printed user's guide for detailed information on how to use your Dell System Utilities.

Before you can use the Dell System Utilities you must reboot.

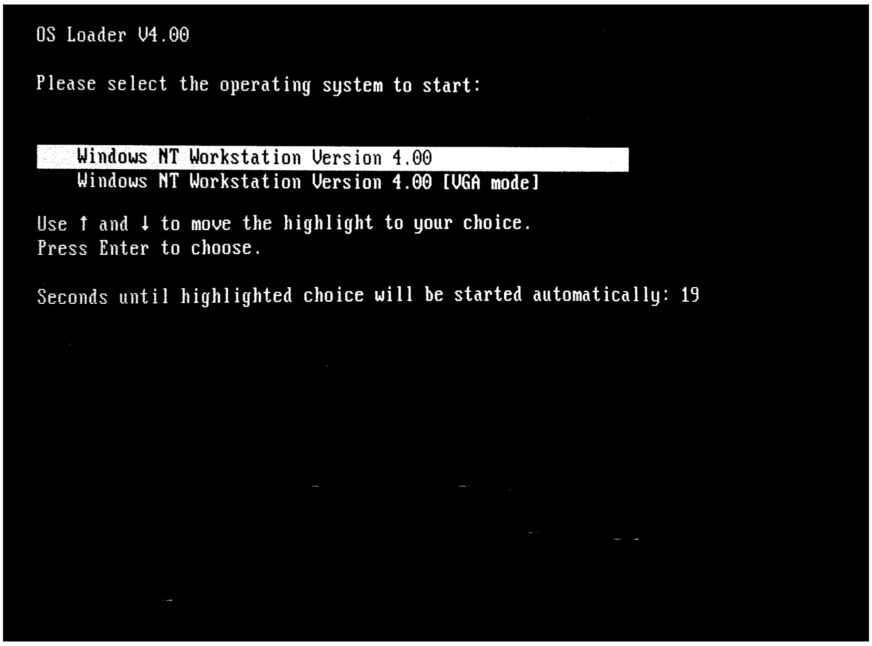
● Yes, I want to restart my computer now.

○ No, I will restart my computer later.

Please remove the Dell System Utilities disk from the disk drive and click Finish to complete setup.

(6) Remove the floppy disk from the drive. Check that the [Yes, I want to restart my computer now.] is selected, then click [Finish].

→ Once the system has restarted, the [Please select the operating system to start:] screen appears.



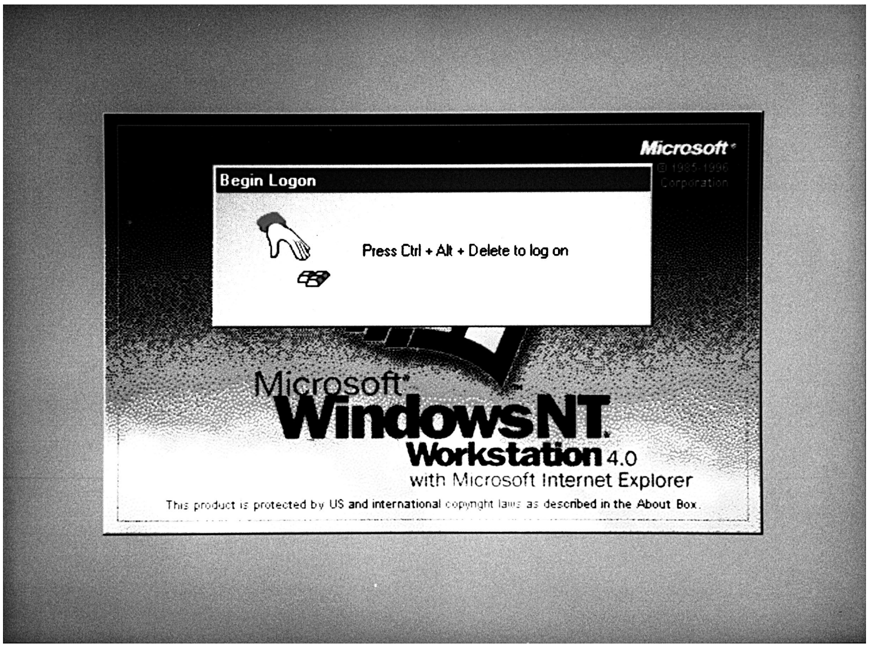
```
OS Loader V4.00

Please select the operating system to start:


    Windows NT Workstation Version 4.00
    Windows NT Workstation Version 4.00 [VGA mode]

Use ↑ and ↓ to move the highlight to your choice.
Press Enter to choose.

Seconds until highlighted choice will be started automatically: 19
```

(7) Check that the operating system [Windows NT Workstation Version 4.00] is highlighted, then press <Enter> key.

◆ REFERENCE ◆

The highlighted operating system boots up automatically if <Enter> key is not pressed within 30 seconds.

→ The [Begin Logon] message appears.



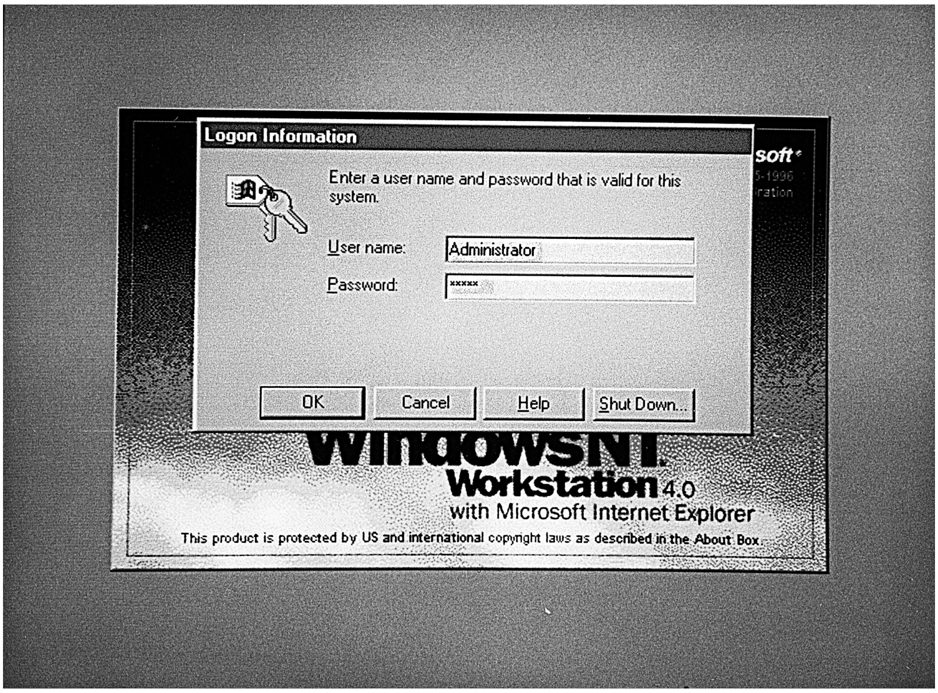
Begin Logon

Press Ctrl + Alt + Delete to log on

This product is protected by US and international copyright laws as described in the About Box.

(8) Press <Ctrl>, <Alt> and <Delete> keys simultaneously.

→ The [Logon Information] dialog appears.



Logon Information

Enter a user name and password that is valid for this system.

User name: Administrator

Password: *****

OK
Cancel
Help
Shut Down...
WindowsNT
Workstation 4.0
with Microsoft Internet Explorer
This product is protected by US and international copyright laws as described in the About Box.

(9) Type “`pc-ps`” in the [Password:] and click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the Windows NT desktop appears.

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8.7 Setting System Startup Latency and Task Bar Display

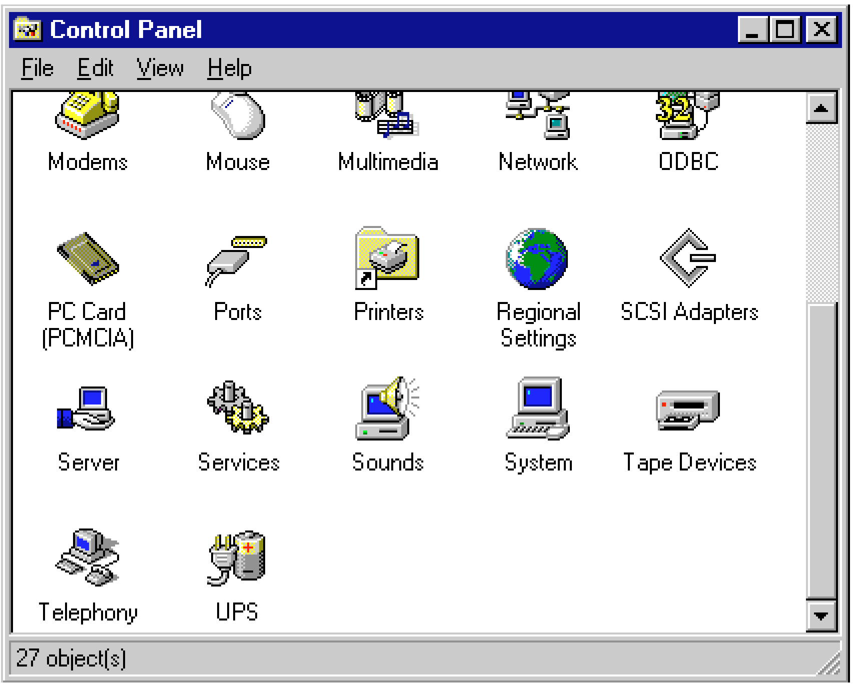
The following procedure shows how to reduce the latency between power-on and system startup. It also describes the procedure to cancel the "Always on top" setting on the task bar in the Windows NT desktop.

◆ REFERENCE ◆

The system startup latency is 5 seconds and the "Always on top" setting on the task bar is off at the factory. However, when the Windows NT is reinstalled, the system default is automatically restored (latency = 30 seconds, Always on top = on).

(1) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

→ The [Control Panel] window appears.


Control Panel
File Edit View Help
Modems
Mouse
Multimedia
Network
ODBC
PC Card (PCMCIA)
Ports
Printers
Regional Settings
SCSI Adapters
Server
Services
Sounds
System
Tape Devices
Telephony
UPS
27 object(s)

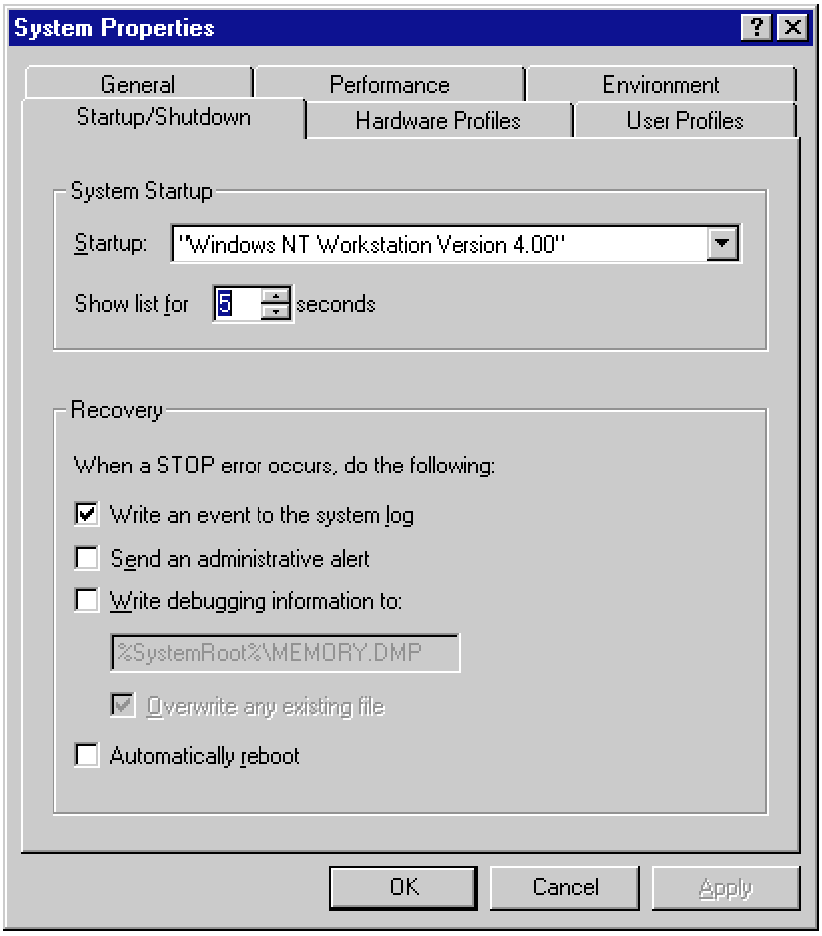
(2) Double-click the [System] icon.

→ The [System Properties] window appears.

(3) Click the [Startup/Shutdown] tab.

→ The [Startup/Shutdown] window appears.

(4) Set the value for [Show list for] to “5” seconds.


System Properties
General
Performance
Environment
Startup/Shutdown
Hardware Profiles
User Profiles
OK
Cancel
Apply

System Startup

Startup: "Windows NT Workstation Version 4.00"

Show list for 5 seconds

Recovery

When a STOP error occurs, do the following:

☑ Write an event to the system log

☐ Send an administrative alert

☐ Write debugging information to:

%SystemRoot%\MEMORY.DMP

☑ Overwrite any existing file

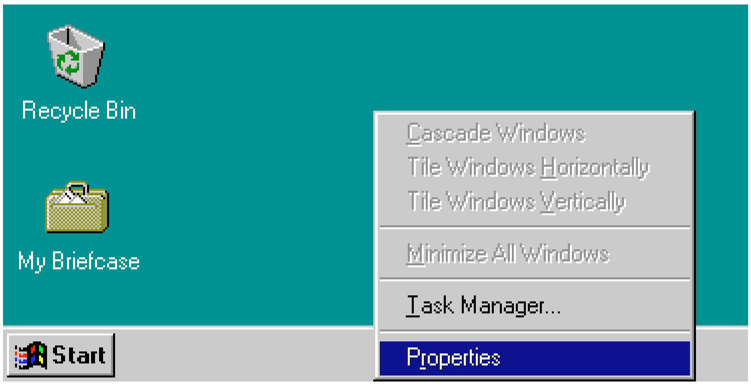
☐ Automatically reboot

(5) Click [OK] on the [System Properties] window.

→ The [Control Panel] window reappears.

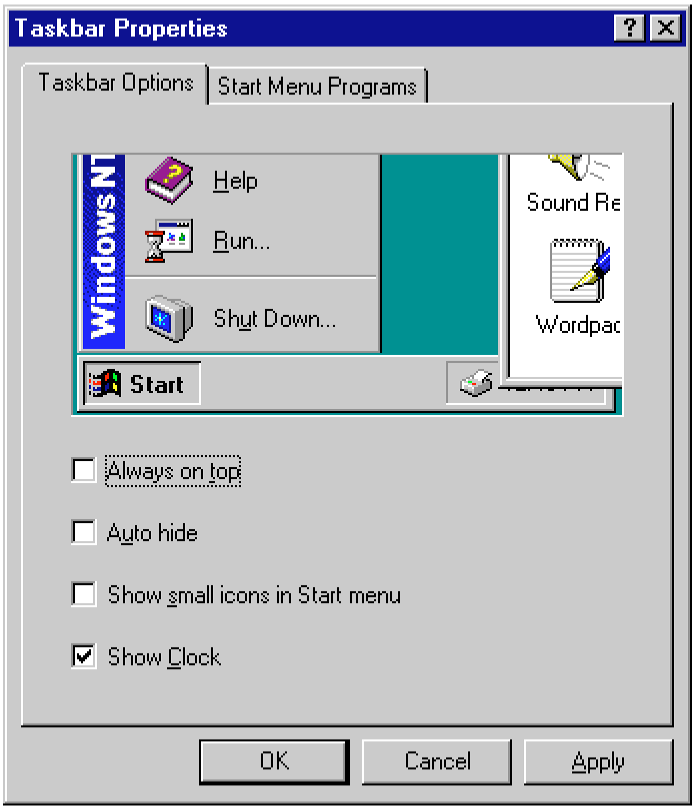
(6) Close the [Control Panel] window.

(7) Right-click the task bar on the Windows NT desktop.
→ The pop-up menu appears.


Recycle Bin
My Briefcase
Start
Cascade Windows
Tile Windows Horizontally
Tile Windows Vertically
Minimize All Windows
Task Manager...
Properties

(8) Choose the [Properties].
→ The [Taskbar Properties] window appears.

(9) To cancel the current setting, click to remove the check mark from the [Always on top] check box on the [Taskbar Options] window.


Taskbar Properties
Taskbar Options
Start Menu Programs
Windows NT
Help
Run...
Shut Down...
Start
Sound Re
Wordpac
OK
Cancel
Apply

☐ Always on top
☐ Auto hide
☐ Show small icons in Start menu
☑ Show Clock

(10) Click [OK] on the [Taskbar Properties] window.

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8.8 Installing the FN-PS551 Application and Key Registry

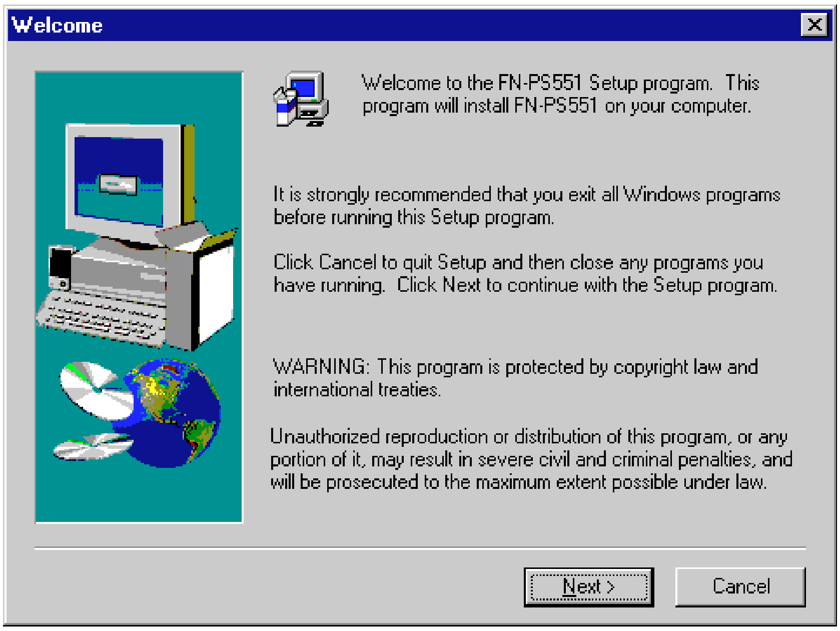
- The following will be required for the installation;
  - FN-PS551 Application CD-ROM .... X 1
  - Key Registry floppy disk
    (for DICOM, TOSHIBA, IPU and/or PEM) .... X 1 to 4

CAUTION

- Ensure that the install disk is write-protected (write-disabled).
- PEM (Pattern enhancement processing for mammography) is an added optional function for IPU specifications. The key registry for PEM is not operated when installing independently. Therefore, it is necessary to install with the key registry for IPU when using the Pattern enhancement processing for mammography option.

(1) Insert the “FN-PS551 Application CD-ROM” into the CD-ROM drive.

→ The CD-ROM starts up automatically and the “Welcome” screen appears.



Welcome to the FN-PS551 Setup program. This program will install FN-PS551 on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

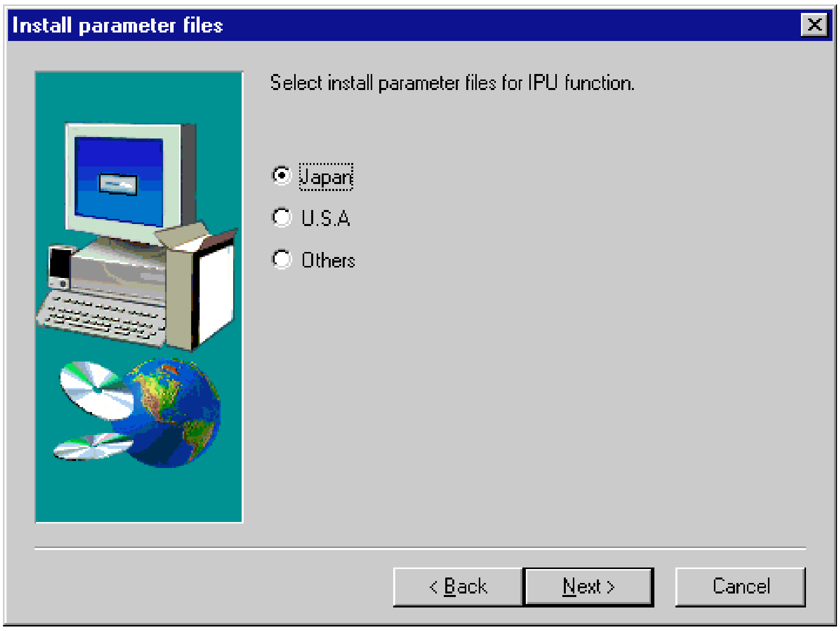
WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(2) Click [Next>].

→ For software ver. A05 or later, a screen for selecting a geographic location specific parameter file for IPU function appears.

For software ver. A04 or earlier, application is installed without displaying this screen. When the installation is complete, the screen in step (3) appears. Execute steps after (4).



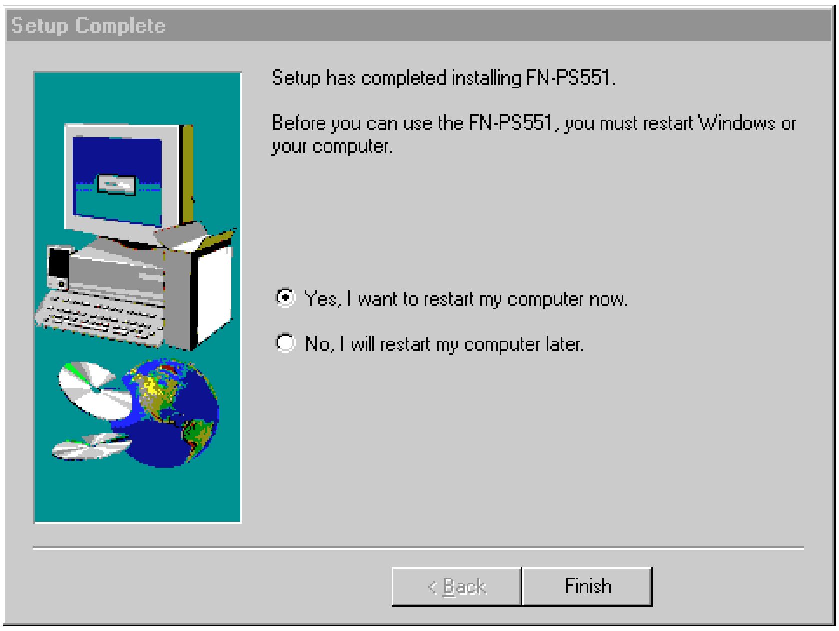
Install parameter files

Select install parameter files for IPU function.

● Japan
○ U.S.A
○ Others

(3) For software ver. A05 or later, choose either [U.S.A.] or [Others] (countries other than the U.S.A.) and click [Next>].

→ The installation process begins. When the installation has been successfully completed, the following screen appears.



Setup Complete

Setup has completed installing FN-PS551.

Before you can use the FN-PS551, you must restart Windows or your computer.

● Yes, I want to restart my computer now.
○ No, I will restart my computer later.

(4) Remove the CD-ROM from the CD-ROM drive and check the [Yes, I want to restart my computer now.] option is selected. Then click [Finish].

◆ NOTE ◆

For DELL OptiPlex GX260 series control unit (Windows XP), do not remove the CD-ROM with this procedure.
If the CD-ROM is removed, CD-ROM drive error occur. Complete step (5), and remove the CD-ROM.

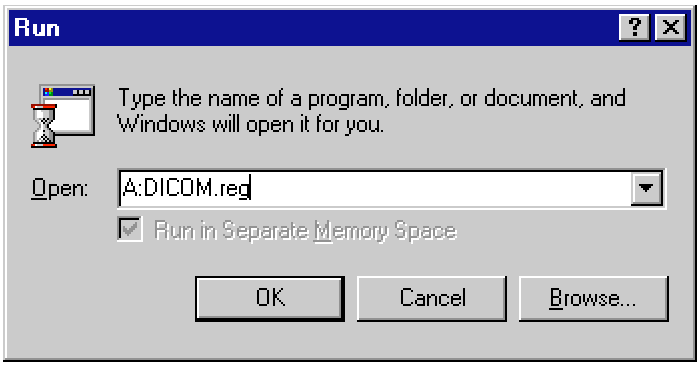
→ The system restarts, and the FN-PS551 application starts up automatically.

(5) Exit from the FN-PS551 application by clicking [Exit] in the [Exit] menu on the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

(6) Insert the “Key Registry” floppy disk (for DICOM, TOSHIBA, IPU or PEM) into the drive.

(7) From the [Start] menu on the Windows desktop, click [Run].
→ The [Run] dialog appears.

(8) Type either “`A:DICOM.reg`”, “`A:TOSHIBA.reg`”, “`A:IPU.reg`” or “`A:PEM.reg`” (depending on which key registry to be installed), then click [OK].
→ The following procedure shows how to install the DICOM key registry software.

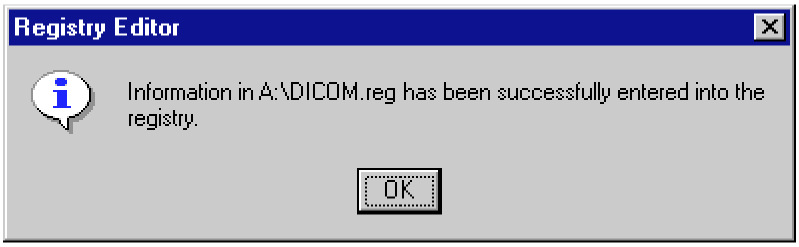

Type the name of a program, folder, or document, and Windows will open it for you.

Open: A:DICOM.reg

◆ NOTE ◆

For Windows XP, when [OK] is clicked, a message asking whether to add to the registry is displayed, click [Yes].

→ The [Registry Editor] information appears.



Information in A:\DICOM.reg has been successfully entered into the registry.

(9) Click [OK].

(10) To use other functions, insert the floppy disk for the key registry software desired. Then, repeat step (7) to (9) shown above.

(11) Remove the key registry software disk from the disk drive.

(12) From the [Start] menu on the Windows desktop, click [Program] (or [All Programs]), [Fuji Photo Film], and then [FN-PS551 Appl] to restart the FN-PS551 application.

→ The FN-PS551 application restarts.

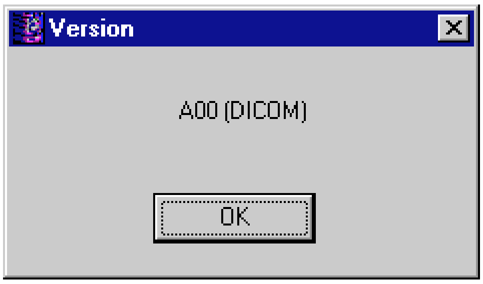
(13) Click the [Version] menu on the [FN-PS551] window.

→ The [Version] message appears.

(14) Check that the version information shows the installed key registry(s) ([DICOM], [TOSHIBA] and/or [IPU]).

Also, [IPU (PEM)] is displayed if IPU and PEM key registry software has been installed.

→ For instance, if the DICOM key registry is installed, the screen should appear as follows:



A00 (DICOM)

(15) Click [OK].

(16) Exit from the FN-PS551 application by clicking [Exit] in the [Exit] menu on the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

8.9 Setting the Language for FN-PS551 Application

To change the representative language for the FN-PS551 application to one other than English (United States) that is a factory default, follow the procedure shown below.

◆ NOTE ◆

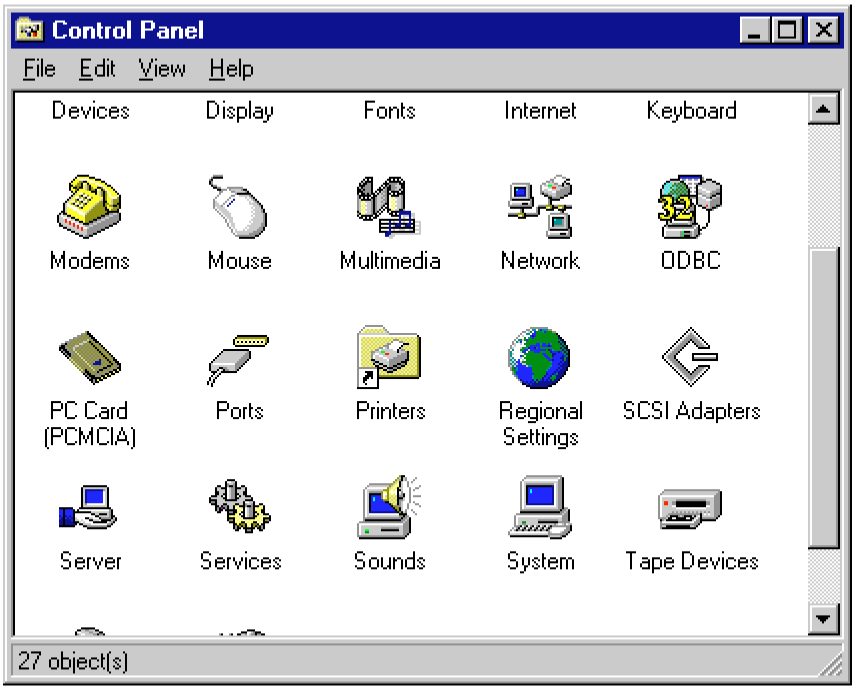
If not changing the representative language, skip this section.

● Items Required to Set a Representative language for the FN-PS551 Application:

- "Windows NT Workstation for Distribution Only with a New PC" CD-ROM (For GX1/GX110 series control unit) .... X 1
- "Reinstallation CD" CD-ROM (For GX150 series control unit) .... X 1

(1) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

→ The [Control Panel] window appears.

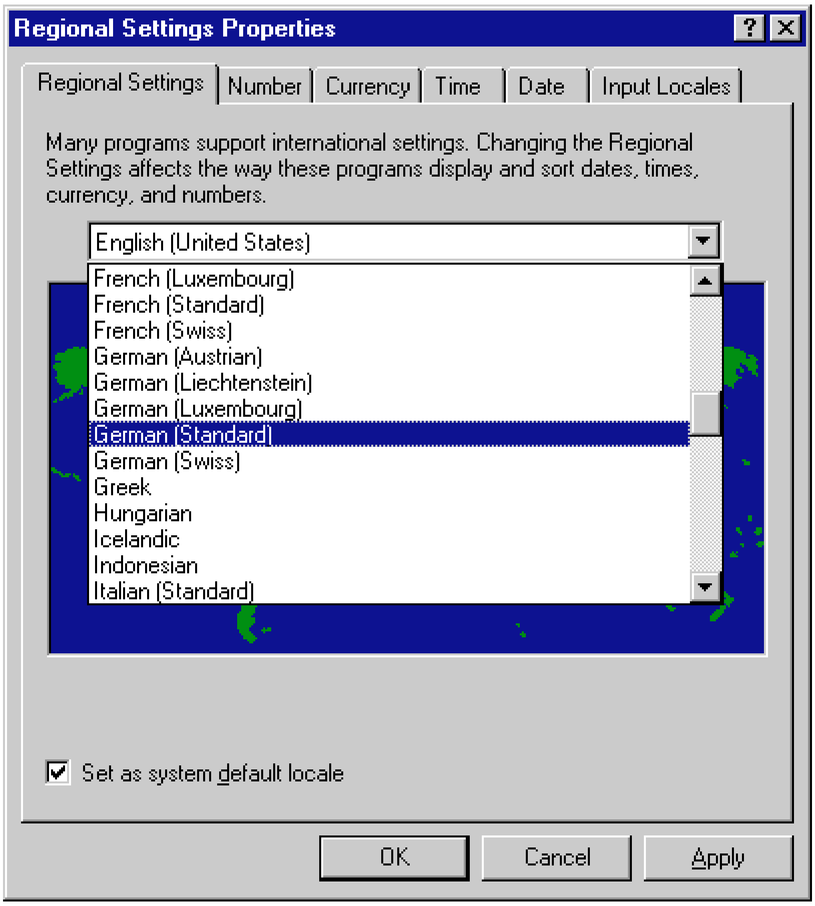

Control Panel
File Edit View Help
Devices
Display
Fonts
Internet
Keyboard
Modems
Mouse
Multimedia
Network
ODBC
PC Card (PCMCIA)
Ports
Printers
Regional Settings
SCSI Adapters
Server
Services
Sounds
System
Tape Devices
27 object(s)

(2) Double click the [Regional Settings] icon.

→ The [Regional Settings Properties] window appears.

(3) At the [Regional Settings] window, select a representative language from the drop down list.

Then check the [Set as system default locate] check box.



Many programs support international settings. Changing the Regional Settings affects the way these programs display and sort dates, times, currency, and numbers.

English (United States)

French (Luxembourg)
French (Standard)
French (Swiss)
German (Austrian)
German (Liechtenstein)
German (Luxembourg)
German (Standard)
German (Swiss)
Greek
Hungarian
Icelandic
Indonesian
Italian (Standard)

☑ Set as system default locale

The representative language can be selected from the following eight alternatives.

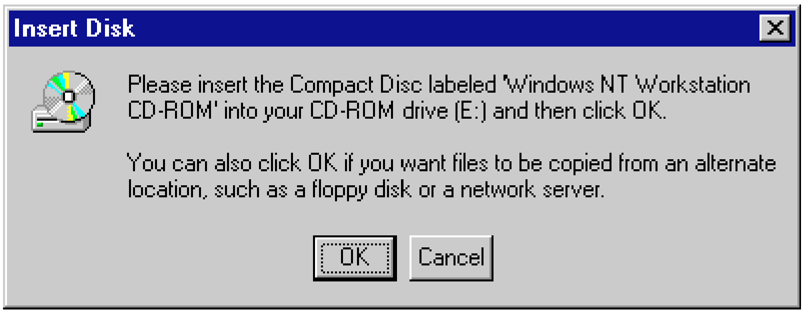
English (United States), French (Standard), German (Standard), Italian (Standard), Norwegian (Bokmal), Swedish, Spanish (Modern Sort), Danish.

◆ NOTE ◆

- Select from the eight languages listed above. Other languages are not supported.
- If the [Set as system default locate] check box is not checked, the representative language is set back to the status which was set just before.

(4) Click [OK] on the [Regional Settings Properties] window.

→ The [Insert Disk] dialog appears.



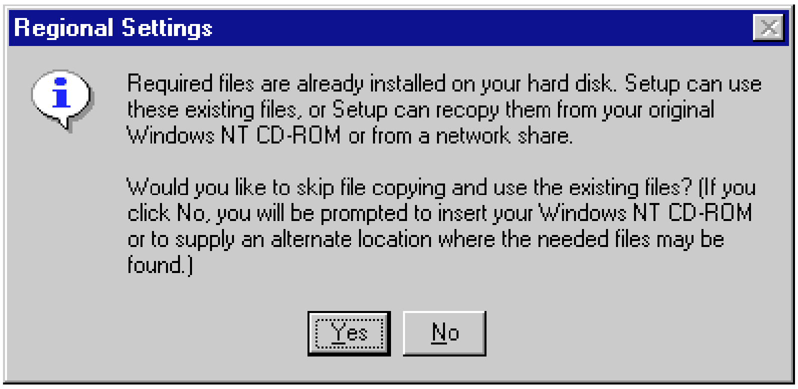
Insert Disk

Please insert the Compact Disc labeled 'Windows NT Workstation CD-ROM' into your CD-ROM drive (E:) and then click OK.

You can also click OK if you want files to be copied from an alternate location, such as a floppy disk or a network server.

◆ NOTE ◆

After clicking [OK] on the [Regional Settings Properties] window, the following [Regional Settings] information may be displayed.



Regional Settings

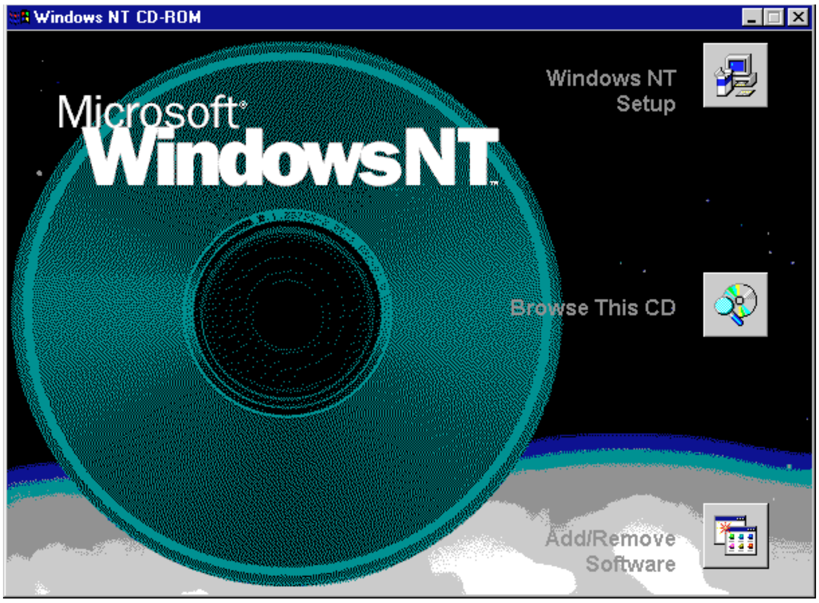
Required files are already installed on your hard disk. Setup can use these existing files, or Setup can recopy them from your original Windows NT CD-ROM or from a network share.

Would you like to skip file copying and use the existing files? (If you click No, you will be prompted to insert your Windows NT CD-ROM or to supply an alternate location where the needed files may be found.)

In this case, click [Yes] because the necessary files have already been installed and do not need to be overwritten. Then, a [Change Regional Settings] message of the step (7) is displayed, so carry out from step (8).

(5) Insert the “Windows NT Workstation for Distribution Only with a New PC” CD-ROM (for GX1/GX110 series) or “Reinstallation CD” CD-ROM (for GX150 series) into the CD-ROM drive.

→ The CD-ROM is automatically started to display the [Windows NT CD-ROM] window.

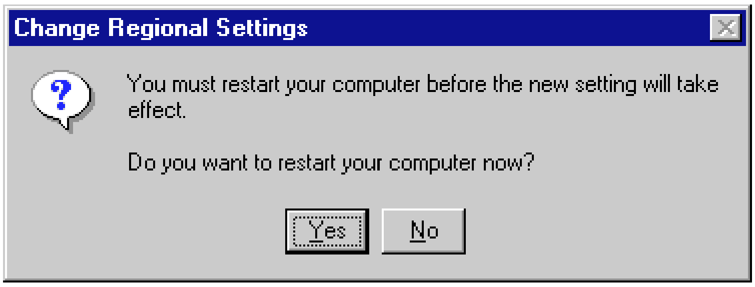

Windows NT CD-ROM
Microsoft WindowsNT
Windows NT Setup
Browse This CD
Add/Remove Software

(6) Click in the upper right close box ☒ of the [Windows NT CD-ROM] window to be closed.

→ The display returns to [Insert Disk] dialog.

(7) Click [OK] on the [Insert Disk] dialog.

→ The [Change Regional Settings] message appears.



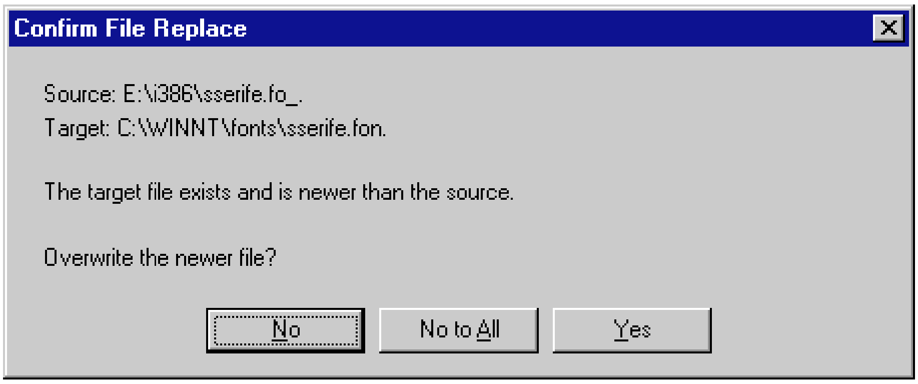
Change Regional Settings

You must restart your computer before the new setting will take effect.

Do you want to restart your computer now?

◆ **NOTE** ◆

After clicking [OK] on the [Insert Disk] dialog, the following [Confirm File Replace] message may be displayed.



Confirm File Replace

Source: E:\i386\sserife.fo_.
Target: C:\WINNT\fonts\sserife.fon.

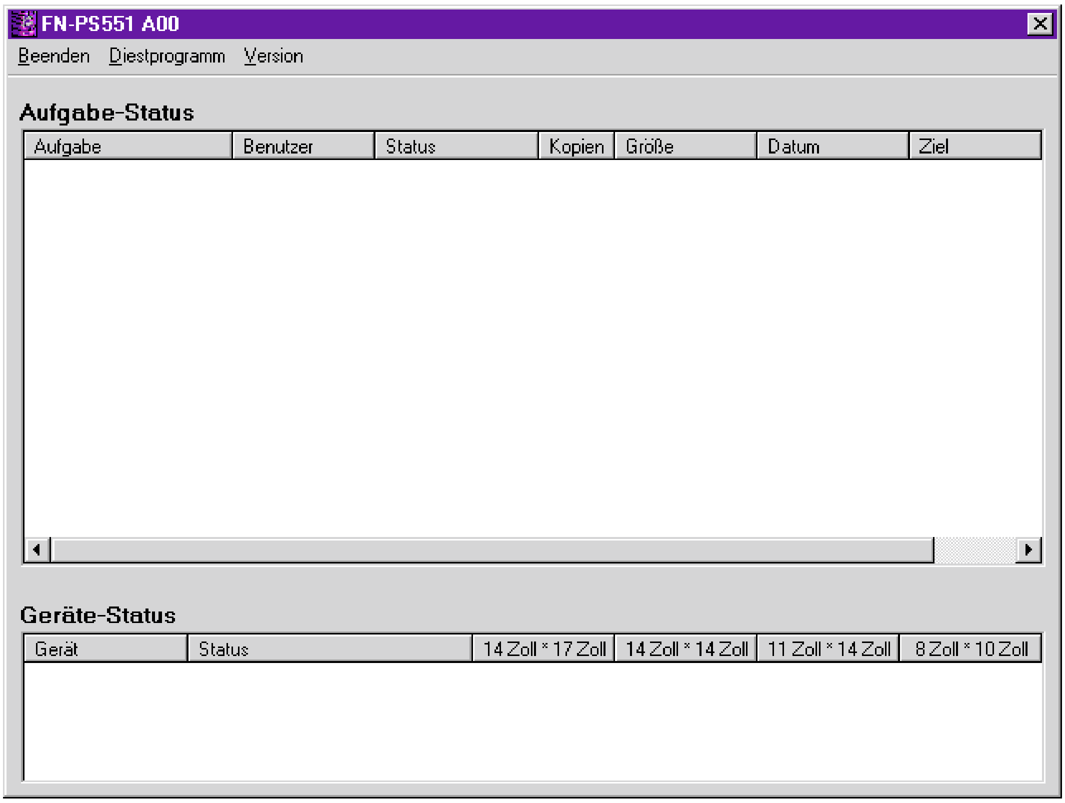
The target file exists and is newer than the source.

Overwrite the newer file?

In this case, click [No] because the necessary files have already been installed and do not need to be overwritten. Then, a [Change Regional Settings] message is displayed.

(8) Remove the CD-ROM from the CD-ROM drive, and choose [Yes] on the [Change Regional Settings] message.

→ The computer reboots and the FN-PS551 application starts up automatically. If "German (Standard)" is specified as the representative language, the following window appears.


FN-PS551 A00
Beenden
Diestprogramm
Version
Aufgabe-Status
Aufgabe
Benutzer
Status
Kopien
Größe
Datum
Ziel
Geräte-Status
Gerät
Status
14 Zoll * 17 Zoll
14 Zoll * 14 Zoll
11 Zoll * 14 Zoll
8 Zoll * 10 Zoll

(9) Confirm that the display on the application window has been changed to the selected language, and then click [Exit] in the [Exit] menu (display varies depending on the selected language) on the menu bar or the close box ☒ in the top right -hand corner of window to exit the FN-PS551 application.

(10) Close the [Control Panel] window on the desk top screen.

9. Setting the Control Unit (PC) to Use PEI01A Board

The procedure described below sets the control unit (PC) to use a PEI01A board (the term “PEI01A board” in this manual later is referred to as PEI board).
The objective of this procedure is to make sure to assign the PEI board an interrupt number other than that of a DXA01A board (the term “DXA01A board” in this manual later is referred to as DXA board) by assigning the interrupt number for DXA board (5 and 10) in advance.

◆ NOTE ◆

- This setting is necessary for all DELL Optiplex GX1, GX110, GX150 and GX260 series control unit models. Perform either “■Setting GX1/GX110 Series Control Unit” or “■Setting GX150/GX260 Series Control Unit” described later according to the control unit model.
- If the last four digits of the SERIAL NUMBER of the control unit is “2247” or later, this setting has been already performed at a factory.
- This setting must be performed, if only PEI board is to be used or PEI and DXA boards are to be used concurrently.
- If a DXA board is only to be used, the performance is not affected without this setting.
- Basic Input/Output System (BIOS) confirms the internal hardware of the control unit and this setting to automatically assign the available interrupt number for a PEI board.
- This settings are saved in the backup RAM in the control unit. The setting, therefore, shall not be affected by repairing the hard disk drive or by re-installing various softwares. Resetting is required, however, when the mother board in the control unit should be repaired or the control unit itself should be replaced.

■ Setting GX1/GX110 Series Control Unit

- ● The following will be required for the setting of the control unit (PC) to use PEI board;
    - “Intel Configuration Utility” disk ....X 1

CAUTION

Ensure that the disk for the setting is write-protected(write-disable).

- Setting Procedure

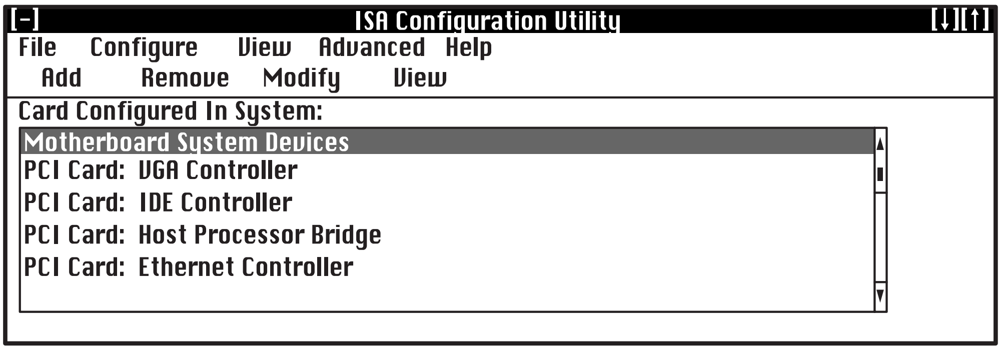
When setting the control unit (PC) for the first time, proceed as described below. It is necessary to perform the setting for two DXA boards; and therefore, repeat following steps (4) to (13) for setting the first and second DXA board.

(1) Switch off the power to the control unit and monitor.

(2) If the PEI or DXA boards are installed in the control unit, remove them all.

(3) Insert the “Intel Configuration Utility” disk into the floppy disk drive, switch on the power to the monitor, and then the control unit.

→ It starts up automatically, and the [ISA Configuration Utility] window appears in approximately 90 seconds.



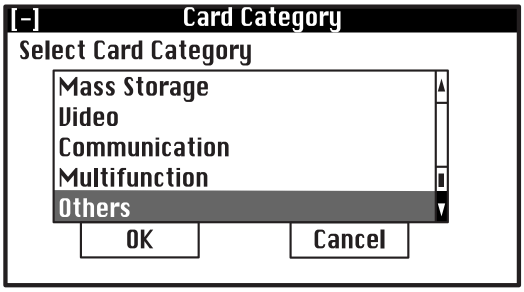
Card Configured In System:

Motherboard System Devices
PCI Card: VGA Controller
PCI Card: IDE Controller
PCI Card: Host Processor Bridge
PCI Card: Ethernet Controller

(4) Click [Add].

→ The [Card Category] dialog appears.

(5) Move the cursor with the down arrow key, select [Others] at the bottom, and click [OK].

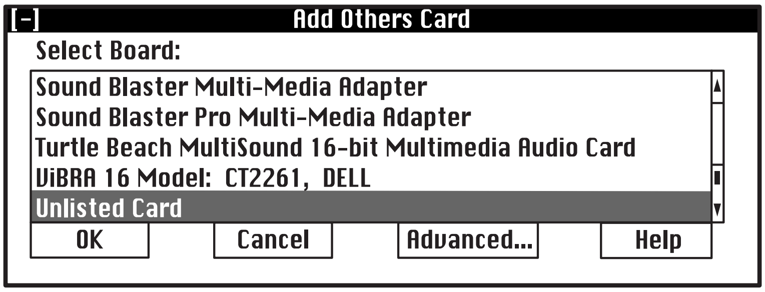


Select Card Category

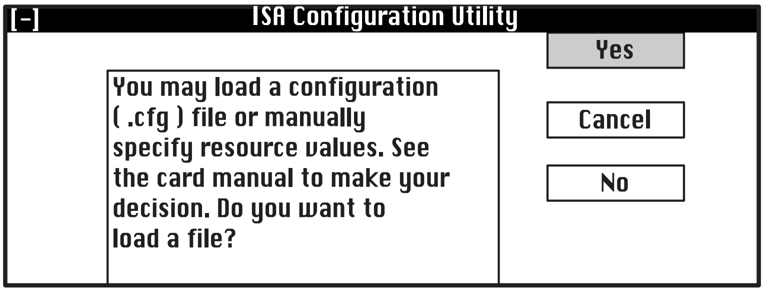
Mass Storage
Video
Communication
Multifunction
Others

→ The [Add Others Card] dialog appears.

(6) Move the cursor with the down arrow key, select [Unlisted Card] at the bottom, and click [OK].


[-]
Add Others Card
Select Board:
Sound Blaster Multi-Media Adapter
Sound Blaster Pro Multi-Media Adapter
Turtle Beach MultiSound 16-bit Multimedia Audio Card
ViBRA 16 Model: CT2261, DELL
Unlisted Card
OK
Cancel
Advanced...
Help

→ The loading selection screen for the card setting file appears.

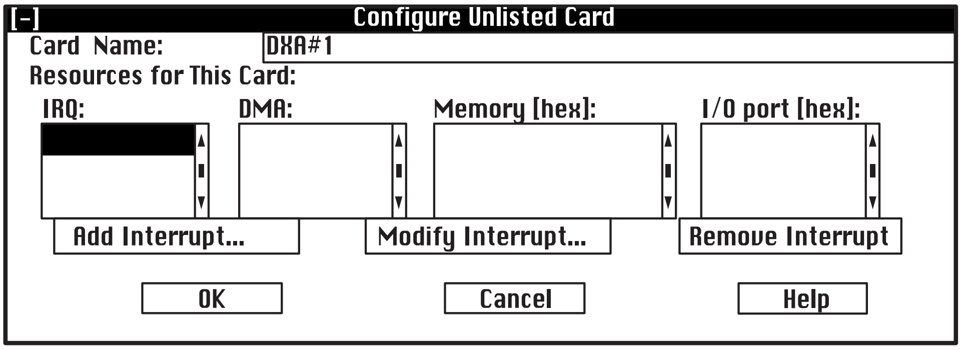

[-]
ISA Configuration Utility
Yes
Cancel
No

You may load a configuration (.cfg) file or manually specify resource values. See the card manual to make your decision. Do you want to load a file?

(7) Click [No].

→ The [Configure Unlisted Card] dialog appears.

(8) Click the [Card Name:] field (the gray area at the right side of the title “Card Name:” at the upper left). Then, type “DXA#1” or “DXA#2” to set the first DXA board or the second DXA board, respectively.

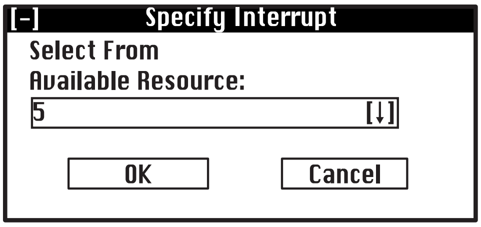

[-]
Configure Unlisted Card
Resources for This Card:
IRQ:
DMA:
Memory [hex]:
I/O port [hex]:
Add Interrupt...
Modify Interrupt...
Remove Interrupt
OK
Cancel
Help

Card Name: DXA#1

(9) Click [Add Interrupt...].

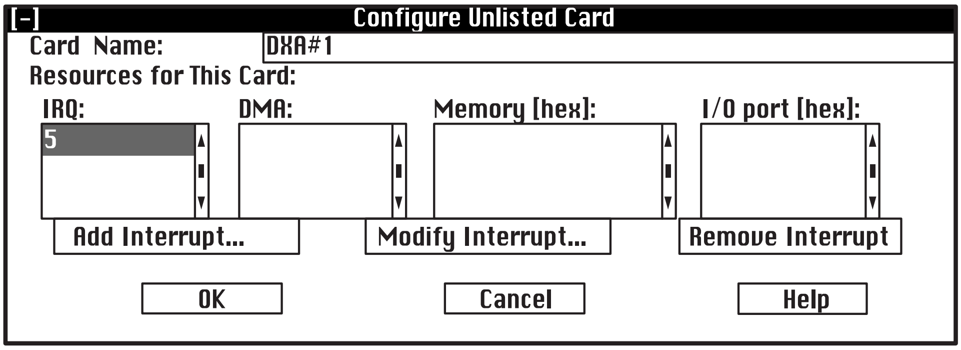
→ The [Specify Interrupt] dialog appears.

(10) Select “5” to set the first DXA board, or “10” to set the second DXA board with the down or up arrow key, and then click [OK].


[-]
Specify Interrupt
[↓]
OK
Cancel

Select From Available Resource: 5

→ Returns to the [Configure Unlisted Card] dialog. Then, the set interrupt number (“5” or “10”) appears in the [IRQ:] field.

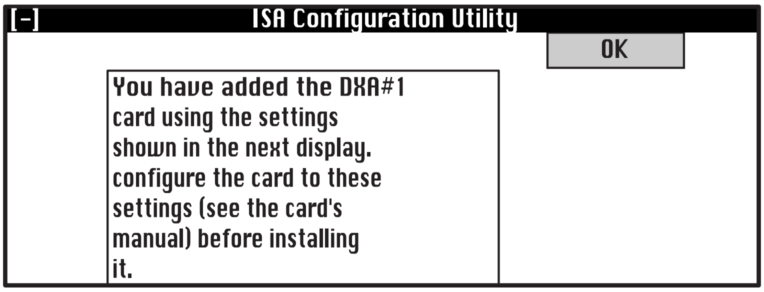

[-]
Configure Unlisted Card
Resources for This Card:
DMA:
Memory [hex]:
I/O port [hex]:
Add Interrupt...
Modify Interrupt...
Remove Interrupt
OK
Cancel
Help

Card Name: DXA#1

IRQ: 5

(11) Click [OK].

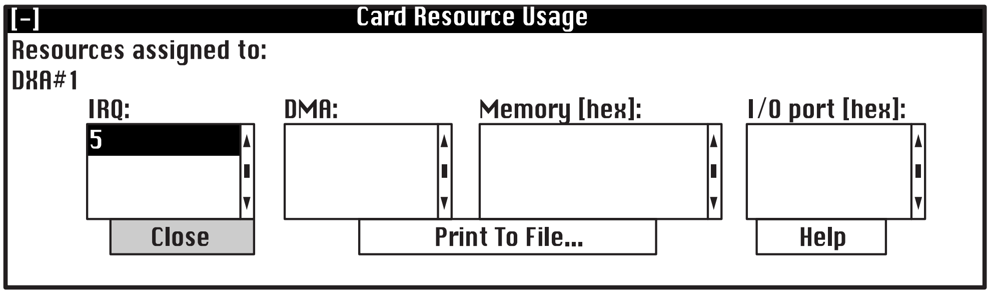
→ The setting confirmation screen appears.


[-]
ISA Configuration Utility
OK

You have added the DXA#1 card using the settings shown in the next display. configure the card to these settings (see the card's manual) before installing it.

(12) Click [OK].

→ The [Card Resource Usage] dialog appears.


[-]
Card Resource Usage
Close
Print To File...
Help

Resources assigned to:
DXA#1

IRQ: 5

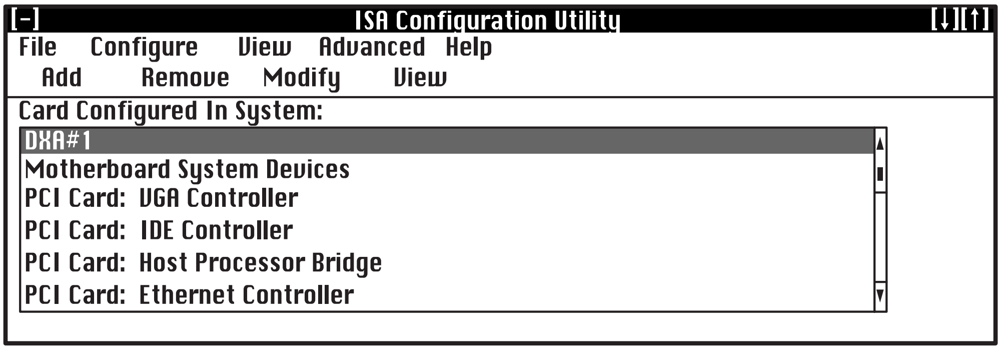
DMA:

Memory [hex]:

I/O port [hex]:

(13) Click [Close].

→ Returns to the [ISA Configuration Utility] window. The names of the set boards ("DXA#1" and "DXA#2") are added in the [Card Configured In System:] list.

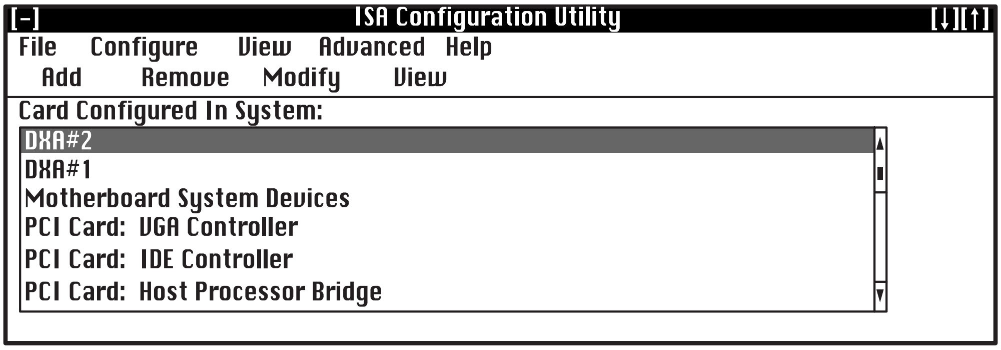

[-]
ISA Configuration Utility
[↓][↑]
File Configure View Advanced Help
Add Remove Modify View

Card Configured In System:

- DXA#1
- Motherboard System Devices
- PCI Card: VGA Controller
- PCI Card: IDE Controller
- PCI Card: Host Processor Bridge
- PCI Card: Ethernet Controller

(14) Repeat the steps (4) to (13) and set the second DXA board in the similar procedure.

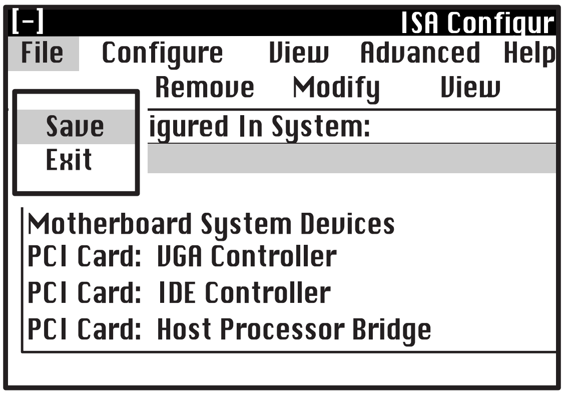
→ When the setting of the first and second DXA board are completed, the [Card Configured In System:] list of the [ISA Configuration Utility] window appears as below.


[-]
ISA Configuration Utility
[↓][↑]
File Configure View Advanced Help
Add Remove Modify View

Card Configured In System:

- DXA#2
- DXA#1
- Motherboard System Devices
- PCI Card: VGA Controller
- PCI Card: IDE Controller
- PCI Card: Host Processor Bridge

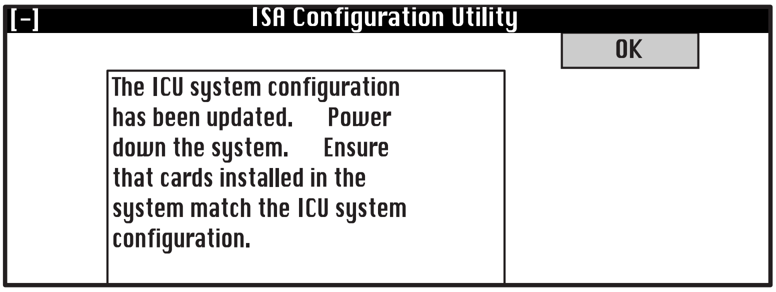
(15) Click the [Save] in the [File] menu.


[-]
ISA Configur
File
Configure
View
Advanced
Help
Remove
Modify
View
Save
Exit

igured In System:

Motherboard System Devices
PCI Card: VGA Controller
PCI Card: IDE Controller
PCI Card: Host Processor Bridge

→ The update confirmation screen for the ICU system configuration appears.


[-]
ISA Configuration Utility
OK

The ICU system configuration has been updated. Power down the system. Ensure that cards installed in the system match the ICU system configuration.

(16) Click [OK].
→ Returns to the [ISA Configuration Utility] window.

(17) Click the [Exit] in the [File] menu.
→ The ISA Configuration Utility is completed, and “C:\ICU>” appears.

(18) Remove the disk from the floppy disk drive, and switch off the power to the control unit and monitor.

(19) Reinstall the PEI or DXA boards in the control unit.

- Confirmation Procedure

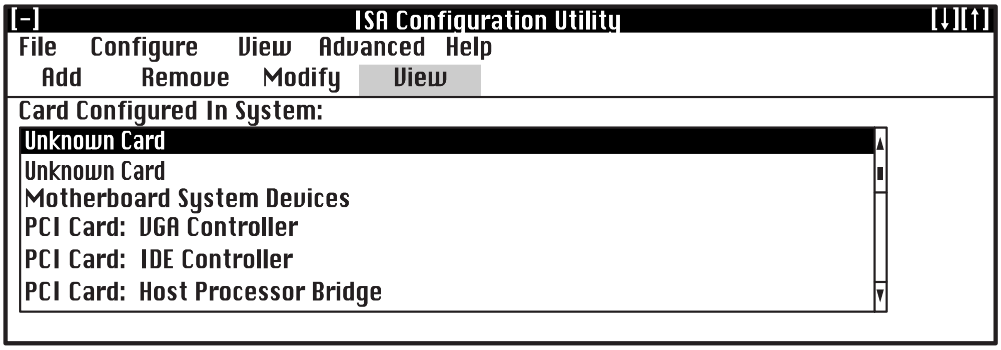
Proceed as described below to confirm the set control unit (PC).

(1) Switch off the power to the control unit and monitor.

(2) If the PEI or DXA boards are installed in the control unit, remove them all.

(3) Insert the “Intel Configuration Utility” disk in the floppy disk drive, switch on the power to the monitor, and then the control unit.

→ It starts up automatically, and the [ISA Configuration Utility] window appears in approximately 90 seconds.



Card Configured In System:

Unknown Card
Unknown Card
Motherboard System Devices
PCI Card: VGA Controller
PCI Card: IDE Controller
PCI Card: Host Processor Bridge

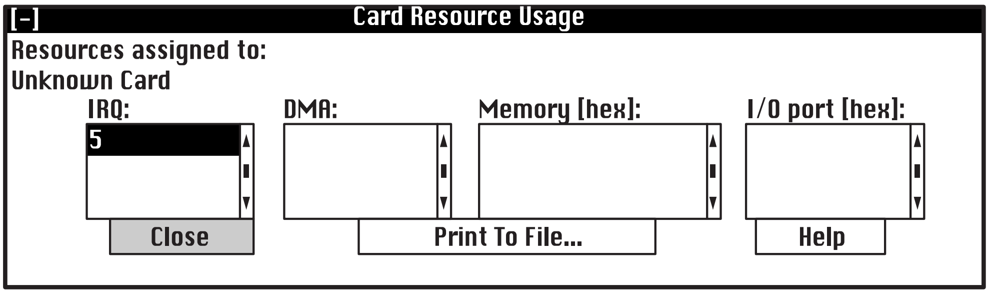
(4) Confirm that two “Unknown Card”s appear in the [Card Configured In System:] list.

◆ NOTE ◆

While “DXA#1” and “DXA#2” appear at the time of the new setting, two “Unknown Card”s appear at the time of the confirmation.

(5) Click either one of the two “Unknown Card”s, and then click the [View] ([View] in the lower menu line).

→ The [Card Resource Usage] dialog for the selected “Unknown Card” appears.



Resources assigned to:
Unknown Card
IRQ: 5
DMA:
Memory [hex]:
I/O port [hex]:

(6) Confirm that the set interrupt number in the [IRQ:] field for one “Unknown Card” is “5” and that for other “Unknown Card” is “10”.

(7) Click [Close].

→ Returns to the [ISA Configuration Utility] window.

(8) Repeat the steps (5) to (7) for seeing the [Card Resource Usage] dialog for the other “Unknown Card”, and confirm the interrupt number in the similar procedure.

(9) Click the [Exit] in the [File] menu when the confirmation is completed.

→ ISA Configuration Utility is completed, and “C:\ICU>” appears.

(10) Remove the disk from the floppy disk drive, and switch off the power to the control unit and monitor.

(11) Reinstall the PEI or DXA boards in the control unit.

■ Setting GX150/GX260 Series Control Unit

Use the setup utility (BIOS) to set the control unit (PC) when using the PEI01A board for GX150 and GX260 series.

CAUTION

Do not change the settings of items that are not specified, using the setup utility (BIOS). If items that are not specified are changed, the system may not operate properly.

● Setting and Confirming Procedure

(1) Switch off the power to the control unit and monitor.

(2) If the PEI boards are installed in the control unit, remove them all.

(3) Switch on the power to the monitor, and then the control unit.

(4) When “F2=Setup” appears at the top right of the screen displaying the “DELL logo mark”, press <F2> key.
→ The setup utility (BIOS) screen appears.

(5) Select [IRQ Reservations] using <↑> or <↓> key, and press <Enter> key.
→ IRQ reservation window appears.

(6) Select [IRQ5] using <↑> or <↓> key, and press <Space> key to set to “Reserved”.
When confirming, check that [IRQ5] is “Reserved”.

(7) Select [IRQ10] using <↑> or <↓> key in the same manner, and press <Space> key to set to “Reserved”.
When confirming, check that [IRQ10] is “Reserved”.

◆ NOTE ◆

All IRQs other than [IRQ5] and [IRQ10] should be set to “Available”.

(8) After checking that [Save Changes and Exit] is selected on the termination window of the setup utility (BOIS), which is displayed by pressing <Esc> key twice, then press <Enter> key.

◆ REFERENCE ◆

If no settings are changed during confirmation, termination window is not displayed and the setup utility (BIOS) finishes automatically.

→ The setup utility (BIOS) finishes and the system restarts.

(9) After restart is complete, perform shutdown procedures, and switch off the power to the control unit and monitor.

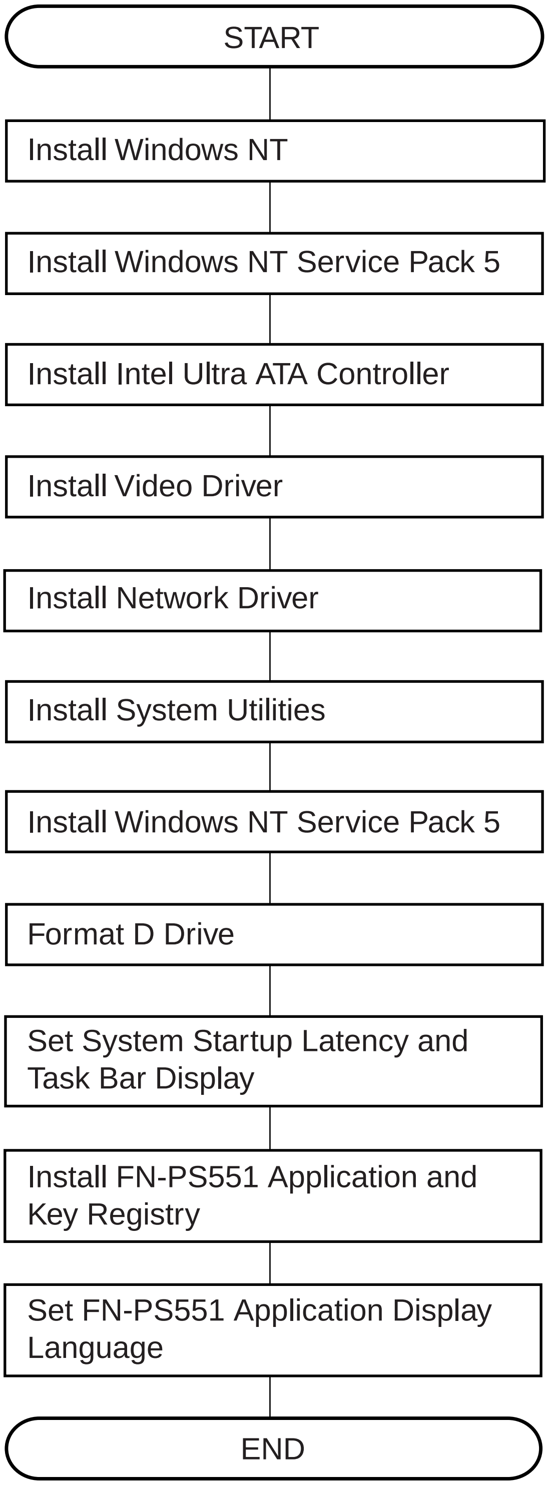
(10) Reinstall the PEI boards in the control unit.

10. Installing Software for GX150 Series Control Unit

◆ NOTE ◆

- The software installation procedure shown in this section applies to OptiPlex GX150 series control unit (PC) models.
- The software installation procedure shown in this section is not explained in detail as in the former “8. Software Installation”.
  Install referring to the contents shown below and in the instruction manual enclosed with the control unit (PC).
  Installation information is sometimes changed, therefore refer to support information on the DELL Web site if necessary.
  The version of the “DELL OptiPlex ResourceCD” used at installation of the various types of driver software changes according to the timing of shipment. Therefore refer to the DELL Web site for the installation guide corresponding to the version of the “DELL OptiPlex Resource CD” to be used.
- After successfully completing the software installation, start up the service utility and set each configuration.
  If the service utility settings file has been saved onto a floppy disk during the normal operation of the FN-PS551 system prior to beginning the software reinstallation, the settings can be restored from this file.

- Software Installation Flowchart


START
Install Windows NT
Install Windows NT Service Pack 5
Install Intel Ultra ATA Controller
Install Video Driver
Install Network Driver
Install System Utilities
Install Windows NT Service Pack 5
Format D Drive
Set System Startup Latency and Task Bar Display
Install FN-PS551 Application and Key Registry
Set FN-PS551 Application Display Language
END

Refer to “10.1 Installing Windows NT”.

Refer to “8.3 Installing the Windows NT Service Pack ■ Installing the Windows NT Service Pack 5”.

Refer to “10.2 Installing the Various Types of Driver Software”.

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Refer to “10.2 Installing the Various Types of Driver Software”.

Refer to “8.3 Installing the Windows NT Service Pack ■ Installing the Windows NT Service Pack 5”.

Refer to “8.5 Formatting the D Drive”.

Refer to “8.7 Setting System Startup Latency and Task Bar Display”.

Refer to “8.8 Installing the FN-PS551 Application and Key Registry”.

Refer to “8.9 Setting the Language for FN-PS551 Application”.

FP4F0239.EPS

◆ NOTE ◆

When installing only the application software, perform “Install FN-PS551 Application and Key Registry” and “Set FN-PS551 Application Display Language”.

10.1 Installing Windows NT

● Preparation

To install Windows NT, it is necessary to startup from the CD-ROM using the "Reinstallation CD" enclosed with the control unit (PC).

Use the setup utility (BIOS) to set for start up from the CD-ROM.

Outline of procedure is shown below.

CAUTION

Do not change the settings of items that are not specified, using the setup utility (BIOS). If items that are not specified are changed, the system may not operate properly.

(1) When "F2=Setup" appears at the top right of the screen displaying the "DELL logo mark" after switching on the power to the control unit, press <F2> key.

→ The setup utility (BIOS) screen appears.

(2) Select [Boot Sequence] using <↑> or <↓> key, and press <Enter> key.

(3) Note down the contents of current [Boot Sequence] (startup order) in a memorandum in order to recover the settings after installation of Windows NT is complete.

(4) Select [IDE CD-ROM Device] using <↑> or <↓> key, and set [IDE CD-ROM Device] at the top using <–> (minus/move upwards) or <+> (plus/move downwards) key.

(5) After checking that [Save Changes and Exit] is selected on the termination window of the setup utility (BIOS), which is displayed by pressing <Esc> key twice, then press <Enter> key.

→ The setup utility (BIOS) finishes and system restarts.

(6) To continue installing Windows NT after restarting is complete, insert the "Reinstallation CD" into the CD-ROM drive.

Perform the following step (8) if installation of Windows NT is not to be performed.

(7) When the CD-ROM is inserted, the [Windows NT CD-ROM] window appears. Click close box ☒ to close the window.

(8) Perform shutdown procedure, and switch off the power to the control unit.

● Installing Windows NT

Use the “Reinstallation CD” enclosed with the control unit (PC) to install Windows NT for the DELL OptiPlex GX150 series.

After freeing up an area of hard disk space, secure the area again to install in the same manner as installing to the former GX1/GX110 series.

Outline of procedure is shown below.

(1) When the power of control unit is switched on, start up begins from the “Reinstallation CD” inserted at “●Preparation”. After this, set up starts automatically, so move forward in order following the instructions on the screen.

(2) [Setup has found Windows NT on your hard disk in the directory shown below.] appears on the screen, so press <N> key (New Version). Move forward in order following the instructions on the screen.

(3) [The list below shows existing partitions and spaces available for creating new partitions.] appears on the screen, so choose each partition displayed, and press <D> key (Delete partition), <Enter> key (Continue) (not necessary except for deletion of system partition), then <L> key (Delete) in this order to delete all partitions.

After deleting all partitions, “Unpartitioned space xxxx MB” appears (xxxx varies depending on the capacity of the hard disk drive).

(4) After deleting all partitions, select “Unpartitioned space xxxx MB” and press <C> key (Create partition).

(5) Enter “`2047`” (unit: MB) in [Create partition of size (in MB)] as the size to be set for system partition (C partition). In the same manner, choose the remainder of “Unpartitioned space xxxx MB”, press <C> key (Create partition), and input the remaining capacity (D partition) (varies depending on the capacity of the hard disk drive) after subtracting the system partition size.

(6) Choose “C: New (Unformatted) 2047 MB” as the partition for installation of Windows NT, and press <Enter> key (Install).

(7) On the partition format selection screen, choose “Format the partition using the NTFS file system”, then press <Enter> key (Continue).

(8) On the installation location selection screen, press <Enter> key (Continue) without changing the contents displayed as default.

(9) On the hard disk more exhaustive secondary examination execution selection screen, press <Enter> key (Continue).

(10) [This portion of Setup has completed successfully.] appears on the screen, so remove the CD-ROM from the drive, then press <Enter> key (Restart Computer).

(11) [Insert Disk] appears on the screen after restarting, then insert the “Reinstallation CD” in the CD-ROM drive and click [OK].

(12) [Windows NT Setup] wizard appears, so enter the necessary information following the instructions displayed on the screen.

- For Setup Options, choose [Typical].
- For Name and Organization, type “`fieldengineer`” in the [Name:] field and “`FUJIFILM`” in the [Organization:] field.
- For Registration, enter the Product ID attached to the control main unit.
- For Computer Name, enter a computer name (host name, e.g., `FN-PS551`) in the [Name] field.

◆ NOTE ◆

- The computer name (host name) must be entered in single-byte alphanumeric characters.
- The computer name (host name) is displayed in upper case once entered in either lower case or upper case.
- For the FUJI protocol (FINP), the maximum length of computer name (host name) is limited to 10 characters. For other protocols, it is limited to 15 characters.
- The computer name (host name) must be a unique name within the installation site. If more than one FN-PS551 is used in the same installation site, each unit must be given a different name.

- For Administrator Account, type the password character string “`pc-ps`” in lower case in both the [Password:] and [Confirm Password:] fields.
- For Emergency Repair Disk, choose [No, do not create an emergency repair disk.] because a repair disk is not to be created.
- For Windows NT Components, choose [Install the most common components (recommended).].
- On the network participation method selection screen, choose [Do not connect this computer to a network at this time.].
- On the Windows NT setup completion screen, click [Finish].

(13) For [Data/Time Properties] dialog, check that [Time Zone] and [Date & Time] are correct (readjust if they are wrong), then click [Close].

(14) [Detected Display] message appears, so click [OK].

(15) [Display Properties] dialog appears, so click [OK].

(16) [Windows NT 4.00 has been installed successfully.] appears on the screen, so remove the CD-ROM from the drive, then click [Restart Computer].

(17) On the operating system selection screen displayed after restarting, check that “Windows NT Workstation Version 4.00” is highlighted, then press <Enter> key.

(18) [Begin Logon] message appears, so press <Ctrl>, <Alt> and <Delete> keys simultaneously.

(19) Type “`pc-ps`” in the [Password:] box of [Logon Information] dialog, then click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value “`Administrator`” for the [User name:] field should be used.

(20) [Welcome to Windows NT] message appears after logging on to Windows NT, so click [Close].

This completes the Windows NT installation process.

◆ NOTE ◆

After installation of Windows NT has been completed, perform “●Preparation” procedures again and recover the contents of [Boot Sequence] (startup order) to the status before change.

10.2 Installing the Various Types of Driver Software

◆ **NOTE** ◆

- Use the “Dell OptiPlex ResourceCD” enclosed with control unit (PC) to install the various types of driver software. The version of the “Dell OptiPlex ResourceCD” changes according to the timing of shipment. The explanation that follows assumes that the version 4.00 is used. If the version is different, refer to the DELL Web site for the installation guide corresponding to the version of the “Dell OptiPlex ResoruceCD” to be used.
- After installation of the Service Pack 5 is complete, install the various types of driver software. Content of the Service Pack 5 is overwritten according to driver software. Therefore after installation of all driver software is complete, install the Service Pack 5 again.

● Preparation

It is necessary to install the “Dell OptiPlex ResourceCD” enclosed with the control unit (PC) beforehand and startup the Dell OptiPlex Resource CD menu screen before installing the various types of driver software.

Outline of procedure is shown below.

❍ Installation of the Dell OptiPlex ResourceCD

◆ **NOTE** ◆

Perform the installation procedure for the Dell OptiPlex ResourceCD shown below just once before installing the various types of driver software.

(1) Insert the “Dell OptiPlex ResourceCD” into the CD-ROM drive.

→ The [ResourceCD Installation] screen starts up automatically.

(2) Click [OK].

→ The [InstallShield Wizard] screen is displayed.

(3) Click [Next].

(4) When [Setup did not detect Internet Explorer 4.0 or later.] is displayed, click [Yes] (setup continue).

→ Installation is performed.

(5) When [InstallShield Wizard Complete] is displayed, remove the CD-ROM from the drive, and check that [Yes, I want to restart my computer now.] is selected, then click [Finish].

→ The system restarts.

(6) On the operating system selection screen displayed after restarting, check that "Windows NT Workstation Version 4.00" is highlighted, then press <Enter> key.

(7) [Begin Logon] message appears, so press <Ctrl>, <Alt> and <Delete> keys simultaneously.

(8) Type "`pc-ps`" in [Password:] box of [Logon Information] dialog, then click [OK].

CAUTION

Since the installation procedure requires logging on to Windows NT as the administrator, the default value "`Administrator`" for the [User name:] field should be used.

→ Once the computer has logged onto Windows NT, the Windows NT desktop appears.

◆ NOTE ◆

Steps from (6) to (8) mentioned above are common restarting procedures for installing the various types of drivers, therefore they are omitted from the explanation of procedures in the following.

❍ Startup the Dell OptiPlex ResourceCD menu screen

◆ NOTE ◆

It is necessary to remove the CD-ROM and restart to install each driver software. Therefore, it is necessary to perform the startup procedures of the Dell OptiPlex ResourceCD menu screen shown below for each driver software to be installed.

(1) Insert the "Dell OptiPlex ResourceCD" into the CD-ROM drive.

(2) When the Introduction screen is displayed, click [Next].

(3) Select [OptiPlex GX150] from [System Model] column in [Search Criteria] items displayed on the left side of the screen.

(4) In the same manner, select [Windows NT 4.0] from [Operating System] column and select [Drivers] from [Topic] column.

(5) In the case of [Device Type] column, item to be selected varies according to installation of the various types of drivers afterwards, therefore follow the relevant instructions for each case.

● Installing the Intel Ultra ATA Controller

(1) Startup the Dell OptiPlex ResourceCD menu screen.

(2) Select [Controller] from [Device Type] column, and click [Intel ATA Storage] from the list of [OptiPlex GX150 Controller Drivers Windows NT 4.0].

(3) When the [OptiPlex GX150 Controller Drivers Windows NT 4.0> Intel ATA Storage] screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [WinZip Self-Extractor] screen is displayed, click [OK], [Unzip], and [OK] in this order.

(5) When the [Internet Explorer] window is displayed, scroll the screen down to the bottom, then click [Install Now].

(6) When the [Confirm File Open] screen is displayed, click [Open].

(7) When the [Welcome to the InstallShield Wizard] screen is displayed, click [Next].

(8) When [License Agreement] is displayed, after checking the contents, then click [Yes].

(9) When the [Choose Destination Location] screen is displayed, click [Next].

(10) When [InstallShield Wizard Complete] is displayed, click [Finish].

(11) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

(12) Double-click the [SCSI Adapters] icon on the [Control Panel] window.

(13) Click the [Drivers] tab, select “IDE CD-ROM (ATAPI 1.2)/Dual-channel PCI IDE Co...”, then click [Remove].

(14) When [Remove Driver] is displayed, click [Yes], then click [Add].

(15) When the [Install Driver] screen is displayed, click [Have Disk...].

(16) When the [Install From Disk] screen is displayed, click [Browse...].

(17) When [A:\ is not accessible.] is displayed, click [Cancel].

(18) When the [Locate File] screen is displayed, double-click [My Computer], [(C):], [Program Files], [Intel], and [Ultra ATA Storage Driver] in this order.

(19) When “Intelata” is displayed in [File Name], click [Open].

(20) When the [Install From Disk] screen is displayed, check that “C:\Program Files\Intel\Ultra ATA Storage Driver” is displayed in [Copy manufacturer’s files from] column, then click [OK].

(21) When [SCSI Adapter] column is displayed on the [Install Driver] screen, select “Intel Ultra ATA Controller”, then click [OK].

(22) When [Do you want to restart your computer now?] is displayed, remove the CD-ROM from the drive, then click [Yes].

(23) The system restarts, so perform the common restarting procedure for installing the various types of drivers.

- Installing the Video Driver

(1) Startup the Dell OptiPlex ResourceCD menu screen.

(2) Select [Video] from [Device Type] column, and click [INTEL 815] from the list of [OptiPlex GX150 Video Drivers Windows NT 4.0].

(3) When the [OptiPlex GX150 Video Drivers Windows NT 4.0>INTEL 815] screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [WinZip Self-Extractor] screen is displayed, click [OK], [Unzip], and [OK] in this order.

(5) When the [Internet Explorer] window is displayed, scroll the screen down to the bottom and click [Install Now].

(6) When the [Confirm File Open] screen is displayed, click [Open].

(7) When the [Welcome] screen is displayed, click [Next].

(8) When the [Setup Complete] screen is displayed, remove the CD-ROM from the drive, and check [Yes, I want to restart my computer now.], then click [Finish].

(9) The system restarts, so perform the common restarting procedure for installing the various types of drivers.

(10) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

(11) Double-click the [Display] icon on the [Control Panel] window.

(12) Click the [Settings] tab on the [Display Properties] dialog.

(13) Set [Color Palette] to “True Color or 1677216 Colors”, [Desktop Area] to “640 by 480 pixels” and [Refresh Frequency] to “75 Hertz”.

(14) Click [Test], then click [OK] on the [Testing Mode] information.

(15) Check that the test bit map is displayed properly, and click [Yes] on the [Testing Mode] checking message.

(16) Click [OK] on the [Display Properties] dialog, and close the [Control Panel] window.

● Installing the Network Driver

(1) Startup the Dell OptiPlex ResourceCD menu screen.

(2) Select [Network (NIC)] from [Device Type] column, and click [3COM 3C905C] from the list of [OptiPlex GX150 Network (NIC) Drivers Windows NT 4.0].

(3) When the [OptiPlex GX150 Network (NIC) Drivers Windows NT 4.0> 3COM 3C905C] screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [WinZip Self-Extractor] screen is displayed, click [OK], [Unzip], and [OK] in this order.

(5) When the [Internet Explorer] window is displayed, click close box ☒ to close the window.

(6) From the [Start] menu on the Windows NT desktop, click [Settings] and then [Control Panel].

(7) Double-click the [Network] icon on the [Control Panel] window.

(8) When [Windows NT Networking is not installed. Do you want to install it now?] is displayed, click [Yes].

(9) When the [Network Setup Wizard] screen is displayed, check [Wired to the network], then click [Next].

(10) When [To have setup start searching for a Network Adapter, click Start Search button.] is displayed, click [Select from list...].

(11) When the [Select Network Adapter] screen is displayed, click [Have Disk...].

(12) When the [Insert Disk] screen is displayed, type "`C:\DELL\DRIVERS\1934V`" in the blank field, then click [OK].

(13) When the [Select OEM Option] screen is displayed, click [OK].

(14) Confirm that "3Com EtherLink PCI NIC" is checked in the [Network Adapters:] column, and click [Next].

(15) Check "TCP/IP Protocol" in the [Network Protocols:] column, and click [Next].

(16) When the [Network Services:] column is displayed, click [Next].

(17) When [Windows NT is now ready to install the networking components that you selected and others required by the system.] is displayed, click [Next].

(18) When [Setup needs to copy some Windows NT files.] is displayed, replace the CD-ROM with the "Reinstallation CD" that was used in "●Installing Windows NT".

Then, the [Windows NT CD-ROM] window is displayed, click close box ☒ to close the window.

(19) Type "`E:\i386`" (E is the drive letter of the CD-ROM, which may vary according to the environment) in the blank field, then click [Continue].

(20) When the [TCP/IP Setup] alert for checking whether DHCP server is used is displayed, click [No].

(21) When the [Microsoft TCP/IP Properties] dialog is displayed, enter necessary information including the [IP Address], [Subnet Mask] and [Default Gateway] in the setting items of the IP Address tab, then click [OK].
- [Specify an IP address] option should be selected.
- Enter an IP address for this FN-PS551 in the [IP Address].
- If the network is using a subnet, enter mask data in the [Subnet Mask]. If the network is not using a subnet, enter the Class C mask data (255.255.255.0).
- For [Default Gateway], before receiving image data from clients (modalities) connecting to different networks, enter an IP address for the router (gateway) to which this FN-PS551 is connected.

◆ NOTE ◆

- Confirm details such as IP addresses, subnet masks, and routers with the network administrator of the installation site.
- The setting process cannot be ended until a subnet mask has been entered.
- The [Default Gateway] need not be entered unless image data is received from different networks.

(22) When [You may use this page to disable network bindings or arrange the order in which this computer finds information on the network.] is displayed, click [Next].

(23) When [Windows NT is now ready to start the network so that you can complete the installation of networking.] is displayed, click [Next].

(24) Check that the host name set at "●Installing Windows NT" is displayed in [Computer Name], then click [Next].

(25) When [Networking has been installed on this computer.] is displayed, click [Finish].

(26) When [Do you want to restart your computer now?] is displayed, remove the CD-ROM from the drive, then click [Yes].

(27) The system restarts, so perform the common restarting procedure for installing the various types of drivers.

◆ NOTE ◆

The [Service Control Manager] window is displayed during restart. This is always displayed after the network driver is installed. This can be resolved by installing the Service Pack again after installing all drivers.

● Installing the System Utilities

(1) Startup the Dell OptiPlex ResourceCD menu screen.

(2) Select [System] from [Device Type] column, and click [DELL UTILITIES] from the list of [OptiPlex GX150 System Drivers Windows NT 4.0].

(3) When the [OptiPlex GX150 System Drivers Windows NT 4.0> DELL UTILITIES] screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [WinZip Self-Extractor] screen is displayed, click [OK], [Unzip], and [OK] in this order.

(5) When the [Internet Explorer] window is displayed, click [Install Now].

(6) When the [Confirm File Open] screen is displayed, click [Open].

(7) When the [Welcome] screen is displayed, click [Next].

(8) When the [Dell System Utilities] screen is displayed, check “AutoShutdown Service” only, then click [Next].

(9) When the [Setup is Complete] screen is displayed, remove the CD-ROM from the drive, and check [Yes, I want to restart my computer now.], then click [Finish].

(10) The system restarts, so perform the common restarting procedure for installing the various types of drivers.

◆ NOTE ◆

After installation of the various types of driver software is complete, perform “Install Windows NT Service Pack 5” again according to “●Software Installation Flowchart”. Then, perform “Format D Drive”, “Set System Startup Latency and Task Bar Display”, “Install FN-PS551 Application and Key Registry”, and “Set FN-PS551 Application Display Language”.

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11. Installing Software for GX260 Series Control Unit

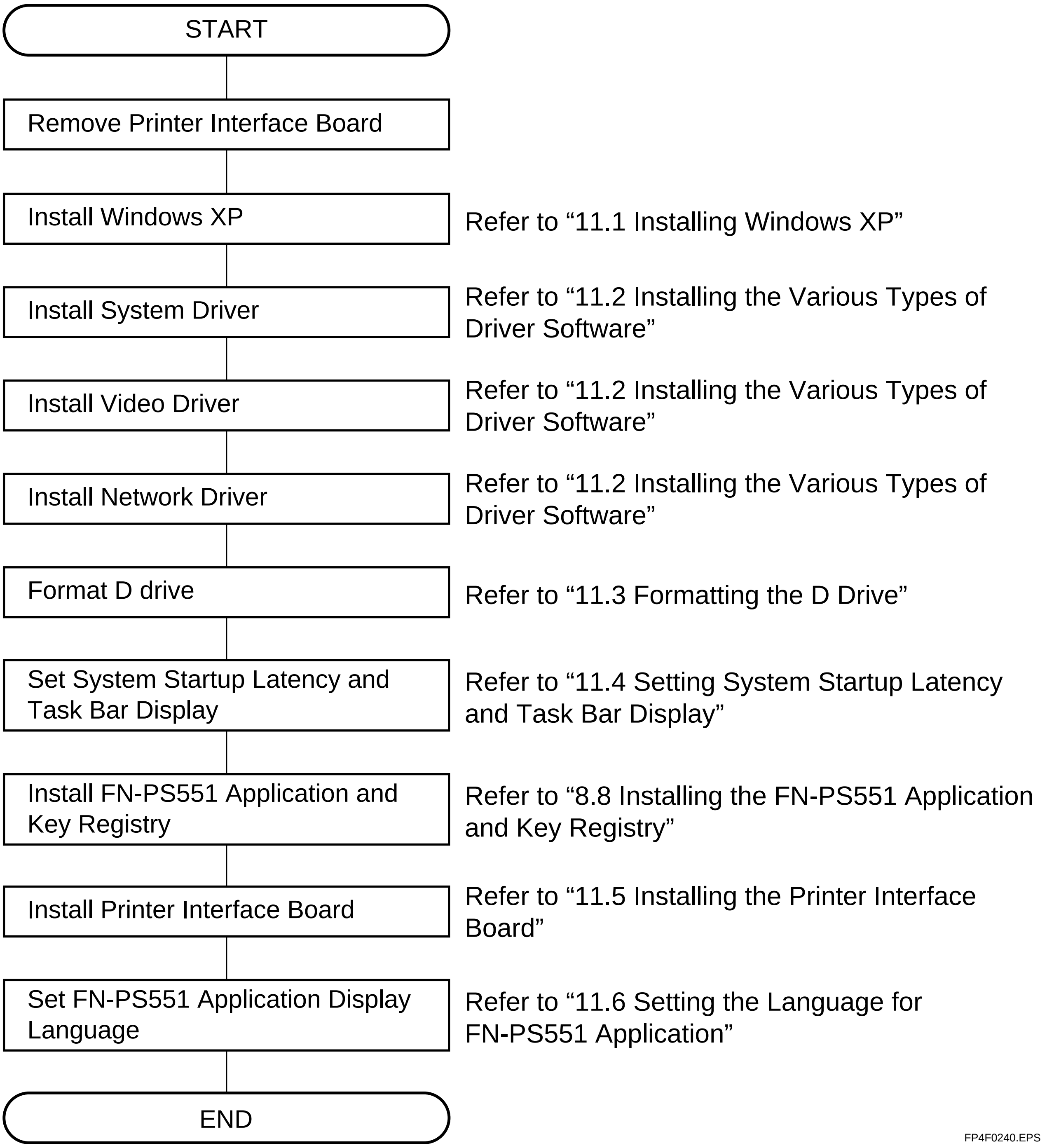
CAUTION

When reinstallation is performed from OS for DELL OptiPlex GX260 series (Windows XP) control unit (PC) models, remove the printer interface board (PEI01A board) from the control unit before reinstallation, and attach it again after installation of FN-PS551 application and key registry is complete. If reinstallation is performed without removing it, the printer interface board will not be recognized properly and operation is not performed normally.
However, it is not necessary to remove the printer interface board if only the application is to be reinstalled.

◆ NOTE ◆

- The software installation procedure shown in this section applies to OptiPlex GX260 series control unit (PC) models.
- The software installation procedure shown in this section is not explained in detail as in the former “8. Software Installation”.
  Install referring to the contents shown below and in the instruction manual enclosed with the control unit (PC).
  Installation information is sometimes changed, therefore refer to support information on the DELL Web site if necessary.
  The version of the “DELL OptiPlex ResourceCD” used at installation of the various types of driver software changes according to the timing of shipment. Therefore refer to the DELL Web site for the installation guide corresponding to the version of the “DELL OptiPlex Resource CD” to be used.
- After successfully completing the software installation, start up the service utility and set each configuration.
  If the service utility settings file has been saved onto a floppy disk during the normal operation of the FN-PS551 system prior to beginning the software reinstallation, the settings can be restored from this file.

● Software Installation Flowchart


START
Remove Printer Interface Board
Install Windows XP
Refer to “11.1 Installing Windows XP”
Install System Driver
Refer to “11.2 Installing the Various Types of Driver Software”
Install Video Driver
Refer to “11.2 Installing the Various Types of Driver Software”
Install Network Driver
Refer to “11.2 Installing the Various Types of Driver Software”
Format D drive
Refer to “11.3 Formatting the D Drive”
Set System Startup Latency and Task Bar Display
Refer to “11.4 Setting System Startup Latency and Task Bar Display”
Install FN-PS551 Application and Key Registry
Refer to “8.8 Installing the FN-PS551 Application and Key Registry”
Install Printer Interface Board
Refer to “11.5 Installing the Printer Interface Board”
Set FN-PS551 Application Display Language
Refer to “11.6 Setting the Language for FN-PS551 Application”
END
FP4F0240.EPS

◆ NOTE ◆

When reinstalling only the application software, perform “Install FN-PS551 Application and Key Registry” and “Set FN-PS551 Application Display Language”.

11.1 Installing Windows XP

● Preparation

To install Windows XP, it is necessary to startup from the CD-ROM using the “OPERATING SYSTEM Reinstallation CD” enclosed with the control unit (PC).
Use the setup utility (BIOS) to set for start up from the CD-ROM.
Outline of procedure is shown below.

CAUTION

Do not change the settings of items that are not specified, using the setup utility (BIOS). If items that are not specified are changed, the system may not operate properly.

(1) When “F2=Setup” appears at the top right of the screen displaying the “DELL logo mark” after switching on the power to the control unit, press <F2> key.

→ The setup utility (BIOS) screen appears.

(2) Select [Boot Sequence] using <↑> or <↓> key, and press <Enter> key.

(3) Note down the contents of current [Boot Sequence] (startup order) in a memorandum in order to recover the settings after installation of Windows XP is complete.

(4) Select [IDE CD-ROM Device] using <↑> or <↓> key, and set [IDE CD-ROM Device] at the top using <–> (minus/move upwards) or <+> (plus/move downwards) key.

(5) After checking that [Save Changes and Exit] is selected on the termination window of the setup utility (BIOS), which is displayed by pressing <Esc> key twice, then press <Enter> key.

→ The setup utility (BIOS) finishes and system restarts.

(6) To continue installing Windows XP after restarting is complete, insert the “OPERATING SYSTEM Reinstallation CD” into the CD-ROM drive.

Perform the following steps after (8) if installation of Windows XP is not to be performed.

(7) When the CD-ROM is inserted, the [Welcome to Microsoft Windows XP] window appears. Click [Exit] to close the window.

(8) Click the [Start] on the Windows desktop, then click [Turn off computer].

(9) From the [Turn off computer] window, click [Turn off] to switch off the power to the control unit.

● Installing Windows XP

Use the “OPERATING SYSTEM Reinstallation CD” enclosed with the control unit (PC) to install Windows XP for the DELL OptiPlex GX260 series.

After freeing up an area of hard disk space, secure the area again to install in the same manner as installing to the former GX1/GX110/GX150 series.

Outline of procedure is shown below.

(1) When the control unit power is switched on. [Press any key to boot from CD] appears at the top left of the screen, press <Enter> key. Start up from the “OPERATING SYSTEM Reinstallation CD” inserted at “● Preparation”. After this, set up starts automatically. So carry out the procedure in order following the instructions on the screen.

(2) [Welcome to Setup.] appears on the screen, so press <Enter> key (Continue).

(3) [Windows XP Licensing Agreement] appears on the screen, so press <Page Down> key and scroll the screen down to the bottom. Press <F8> key (I agree).

(4) When [If one of the following Windows XP installations is damaged, Setup can try to repair it.] is displayed on the screen, press <Esc> key (Don't Repair).

(5) When [The following list shows the existing partitions and unpartitioned space on this computer.] is displayed on the screen, select each partition displayed (C and D) and press the <D> key (Delete Partition), <Enter> key (Continue, not necessary expect for deletion of system partition), then <L> key (Delete) in this order to delete all partitions.

When deletion of all partitions is complete, “Unpartitioned space xxxxxMB” (xxxxx varies according to hard disk capacity) is displayed.

◆ NOTE ◆

If “-:Partition1[FAT] xxMB” is displayed in the list, this should not be deleted.

(6) After deleting all partitions, select “Unpartitioned space xxxxxMB” and press <C> key (Create Partition).

(7) Enter a figure equal to half the value of the numeric figure displayed in “The maximum size for the new partition is xxxxxMB.” to [Create Partition of Size (In MB):] as the size to be set for system partition (C Partition), and press <Enter> key.

◆ NOTE ◆

The numeric figure entered here doesn't have to be exactly half. If half the value is a fractional figure, it can be rounded up or down.

(8) In the same manner, select the remaining “Unpartitioned space xxxxxMB”, press <C> key (creation of partition) and press <Enter> key leaving the figure displayed under “Create Partition of Size (in MB): xxxxx” as it is (D partition).

◆ NOTE ◆

When “Unpartitioned space xMB” is displayed after C and D partitions are created, leave this as it is.

(9) Choose “C:Partition2 [New(Raw)] xxxxxMB” as the partition for installation of Windows XP, and press <Enter> key (Install).

(10) On the partition format selection screen, choose “Format the partition using the NTFS file system”, then press <Enter> key.

Then, formatting of the hard disk, copying of Windows XP files and restart of computer are performed automatically.

◆ NOTE ◆

Hereafter, [Press any key to boot from CD] is displayed during restarting, however, do not perform any operations at that time.

(11) [Windows XP Professional Setup] wizard appears, so enter the necessary information following the instructions displayed on the screen.

- For Regional and Language Options, do not change from “English (United States)”, which is set as the default.
- For Personalize Your Software, enter “`fieldengineer`” in the [Name] field and “`FUJIFILM`” in the [Organization] field.
- For Computer Name and Administrator Password, enter a computer name (host name, e.g., “`FN-PS551`”) in the [Computer name] field. Then enter the password character string "`pc-ps`" in lower case in both the [Administrator password] and [Confirm password] fields.

◆ NOTE ◆

- The computer name (host name) must be entered in single-byte alphanumeric characters.
- The computer name (host name) is displayed in upper case once entered in either lower case or upper case.
- For the FUJI protocol (FINP), the maximum length of computer name (host name) is limited to 10 characters. For other protocols, it is limited to 15 characters.
- The computer name (host name) must be a unique name within the installation site. If more than one FN-PS551 is used in the same installation site, each unit must be given a different name.

- For Date and Time Settings, check that [Time Zone] and [Date & Time] are correct (readjust if they are wrong).

(12) [Display Settings] appears on the screen, click [OK].

(13) [To begin, click your user name] appears on the screen, enter “`pc-ps`” in the Administrator password box, then click ⇥ button.

◆ **NOTE** ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

(14) Remove the CD-ROM from the CD-ROM drive.

This completes the Windows XP installation process.

(15) Click [start] on the Windows desktop, then click [Turn off computer].

(16) From the [Turn off computer] window, click [Turn off] to switch off the power to the control unit.

◆ **NOTE** ◆

After installation of Windows XP has been completed, perform “● Preparation” procedures again and recover the contents of [Boot Sequence](startup order) to the status before change.

11.2 Installing the Various Types of Driver Software

◆ NOTE ◆

Use the “Dell OptiPlex ResourceCD” enclosed with control unit (PC) to install the various types of driver software. The version of the “Dell OptiPlex ResourceCD” changes according to the timing of shipment. The explanation that follows assumes that the version 5.03 is used. If the version is different, refer to the DELL Web site for the installation guide corresponding to the version of the “Dell OptiPlex ResoruceCD” to be used.

● Preparation

It is necessary to install the “Dell OptiPlex ResourceCD” enclosed with the control unit (PC) beforehand and startup the Dell OptiPlex Resource CD menu screen before installing the various types of driver software.

Outline of procedure is shown below.

❍ Installation of the Dell OptiPlex ResourceCD

◆ NOTE ◆

Perform the installation procedure for the Dell OptiPlex ResourceCD shown below just once before installing the various types of driver software.

(1) Insert the “Dell OptiPlex ResourceCD” into the CD-ROM drive.

→ The [ResourceCD Installation] screen starts up automatically.

(2) Click [OK].

→ The [InstallShield Wizard] screen is displayed.

(3) Click [Next].

→ Installation is performed.

(4) When [InstallShield Wizard Complete] is displayed, then click [Finish].

→ The [DELL OptiPlex ResourceCD] screen is displayed.

(5) Click the close box (☒) on the [Dell OptiPlex ResourceCD] screen, remove the CD-ROM from the CD-ROM drive.

(6) Click [start] on the Windows desktop, then click [Turn off computer].

(7) Click [Restart] on the [Turn off computer] window.

(8) When [To begin, click your user name] is displayed on the screen after the system restarts, enter “`pc-ps`” in the Administrator Password box, then click ⇥ button.

◆ NOTE ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

❍ Startup the Dell OptiPlex ResourceCD menu screen

◆ NOTE ◆

It is necessary to remove the CD-ROM and restart to install each driver software. Therefore, it is necessary to perform the startup procedures of the Dell OptiPlex ResourceCD menu screen shown below for each driver software to be installed.

(1) Insert the “Dell OptiPlex ResourceCD” into the CD-ROM drive.

(2) When the [DELL OptiPlex ResourceCD] screen is displayed, click [Next].

(3) Select [OptiPlex GX260] from [System Model] column in [Search Criteria] items displayed on the left side of the screen.

(4) In the same manner, select [Windows XP] from [Operating System] column and select [Drivers] from [Topic] column.

- Installing the System Driver

(1) Startup the DELL OptiPlex ResourceCD menu screen.

(2) From the list of [System Drivers], click [Intel 800 Series Integrated Chipset Rev:A06].

(3) When the next screen displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [Chip set:Intel 800 Series Integrated Chipset] screen is displayed, click [Continue].

(5) When the [Select the folder where you want to unzip the files to] screen is displayed, click [OK], [Yes] and [OK] in this order.

(6) When the [Internet Explorer] window is displayed, scroll the screen down to the bottom, then click [Install Now].

(7) When the [File Download] screen is displayed, click [Open].

(8) When the [Setup] screen is displayed, click [Next].

(9) When the [License Agreement] screen is displayed, after checking the contents, then click [Yes].

(10) When the [Readme Information] screen is displayed, click [Next].

(11) When [InstalShield(R) Wizard Complete] is displayed, remove the CD-ROM from the CD-ROM drive, check [Yes, I want to restart my computer now.], then click [Finish].

(12) When [To begin, click your user name] is displayed on the screen after the system restarts, enter “`pc-ps`” in the Administrator Password box, then click → button.

◆ NOTE ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

- Installing the Video Driver

(1) Startup the DELL OptiPlex ResourseCD menu screen.

(2) From the list of [Video Drivers], click [Intel 845 G/GL Integrated Video Rev:A01].

(3) When the next screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [Video:Intel 845 G/GL Integrated Video] screen is displayed, click [Continue].

(5) When the [Select the folder where you want to unzip the files to] screen is displayed, click [OK], [Yes] and [OK] in this order.

(6) When the [Internet Explorer] window is displayed, scroll the screen down to the bottom, then click [Install Now].

(7) When the [File Download] screen is displayed, click [Open].

(8) When the [Intel(R) Extreme Graphics Driver Software Setup] screen is displayed, click [Next].

(9) When [InstalShield Wizard Complete] is displayed, remove the CD-ROM from the CD-ROM drive, check [Yes, I want to restart my computer now.], then click [Finish].

(10) When [To begin, click your user name] is displayed on the screen after the system restarts, enter “`pc-ps`” in the Administrator Password box, then click → button.

◆ NOTE ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

(11) Click [start] on the Windows desktop, then click [Control Panel].

(12) Click the [Appearance and Themes] icon on the [Control Panel] window.

(13) Click the [Display] icon on the [Appearance and Themes] window.

(14) Click [Advanced] from the setting items under the [Settings] tab on the [Display Properties] dialog.

(15) Click [List All Modes] from the setting items under the [Adapter] tab on [Plug and Play Monitor and Intel(R)82845G/GL Graphics Contr...] dialog.

(16) From the [List of valid modes], select "640 x 480, True Color (32bit), 75Hertz", then click [OK].

(17) Click [Apply] on the [Plug and Play Monitor and Intel(R) 82845G/GL Graphics Contr...] dialog.

(18) Click [Yes] on the [Monitor Settings] screen.

◆ NOTE ◆

Above mentioned procedure (18) should be performed within 15 sec. Settings will be rendered invalid, if the procedure is not performed within the time limit.

(19) Click [OK] on the [Plug and Play Monitor and Intel(R) 82845G/GL Graphics Contr...] dialog.

(20) Select "(None)" from the [Screen saver] list under the [Screen Saver] tab on the [Display Properties] dialog.

(21) Click [OK] on the [Display Properties] dialog, then close the [Appearance and Themes] window.

- Installing the Network Driver

(1) Startup the DELL OptiPlex ResourseCD menu screen.

(2) From the list of [Network (NIC) Drivers], click [Intel 8255X 10/100/1000 Integrated Network Rev:A00].

(3) When the next screen is displayed, scroll the screen down to the bottom, then click [Extract].

(4) When the [Network:8255X 10/100/1000 Integrated NIC Driver] screen is displayed, click [Continue].

(5) When the [Select the folder where you want to unzip the files to] screen is displayed, click [OK], [Yes] and [OK] in this order.

(6) When the [Internet Explorer] window is displayed, click the close box (☒) to close the window.

(7) When the [R42108] folder is displayed, double-click the [WinXP] folder, then double-click [Setup.exe].

(8) When the [Installing network drivers ...] screen disappears, close all opened windows.

(9) Remove the CD-ROM from the CD-ROM drive, click [start] on the Windows desktop, then click [Turn off computer].

(10) Click [Restart] on the [Turn off computer] window.

(11) When [To begin, click your user name] is displayed on the screen after the system restarts, enter “`pc-ps`” in the Administrator Password box, then click → button.

◆ NOTE ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

(12) Click [start] on the Windows desktop, then click [Control Panel].

(13) Click the [Network and Internet Connections] icon on the [Control Panel] window.

(14) Click the [Network Connections] icon on the [Network and Internet Connections] window.

(15) Right-click the [Local Area Connection] icon on the [Network Connections] window, then click [Properties] on the menu displayed.

(16) From the list titled [This connection uses the following items:] on the [Local Area Connection Properties] dialog, select “Internet Protocol (TCP/IP)”, then click [Properties].

(17) Enter necessary information including the [IP address], [Subnet Mask] and [Default Gateway] in the setting items under the [General] tab on the [Internet Protocol (TCP/IP) Properties] dialog, then click [OK].

- [Use the following IP address] option should be selected.
- Enter an IP address for this FN-PS551 in the [IP Address].
- If the network is using a subnet, enter mask data in the [Subnet Mask]. If the network is not using a subnet, enter the Class C mask data (“255.255.255.0”).
- For [Default Gateway], before receiving image data from clients (modalities) connecting to different networks, enter an IP address for the router (gateway) to which this FN-PS551 is connected.

◆ NOTE ◆

- Confirm details such as IP addresses, subnet masks, and routers with the network administrator of the installation site.
- The setting process cannot be ended until a subnet mask has been entered.
- The [Default Gateway] need not be entered unless image data is received from different networks.

(18) Click [Close] on the [Local Area Connection Properties] dialog, then close the [Network Connections] window.

(19) Click [start] on the Windows desktop, then click [Turn off computer].

(20) Click [Restart] on the [Turn off computer] window.

(21) When [To begin, click your user name] is displayed on the screen after the system restarts, enter “`pc-ps`” in the Administrator Password box, then click → button.

◆ NOTE ◆

Since the installation procedure requires logging on to Windows XP as an administrator, the default value “Administrator” should be used.

After this, the Windows XP desktop appears.

11.3 Formatting the D Drive

(1) Click [start] on the Windows desktop, then click [My Computer].

(2) Right-click the [Local Disk (D:)] icon on the [My Computer] window.

(3) Click [Format] on the menu displayed.

(4) Select “NTFS” as the [File System] on the [Format Local Disk (D:)] dialog, then click [Start].

(5) When an alert is displayed stating that all data in the specified drive is to be deleted, click [OK].

(6) The D: drive is reformatted (Formatting time varies depending on the capacity of the hard disk drive).

(7) When a message is displayed stating that format is complete, click [OK].

(8) Click [Close] on the [Format Local Disk (D:)] dialog to close the [My Computer] window.

11.4 Setting System Startup Latency and Task Bar Display

(1) Click [start] on the Windows desktop, then click [Control Panel].

(2) Click the [Performance and Maintenance] icon on the [Control Panel] window.

(3) Click the [System] icon on the [Performance and Maintenance] window.

(4) Click [Settings] of [Startup and Recovery] from the setting items under the [Advanced] tab on the [System Properties] dialog.

(5) Set the value for [Time to display list of operating systems] box on the [Start up and Recovery] dialog to “5” sec., then click [OK].

(6) Click [OK] on the [System Properties] dialog, then close the [Performance and Maintenance] window.

(7) Right-click the taskbar on the Windows desktop.

(8) Click [Properties] on the menu displayed.

(9) Remove the check mark from [Keep the taskbar on top of other windows] under the setting items of the [Taskbar] tab on the [Taskbar and Start Menu Properties] dialog.

(10) Click [OK] on the [Taskbar and Start Menu Properties] dialog.

◆ NOTE ◆

After “Setting System Startup Latency and Task Bar Display” is complete, carry out “8.8 Installing the FN-PS551 Application and Key Registry” according to “● Software Installation Flowchart”. If the printer interface board was removed, carry out “11.5 Installing the Printer Interface Board” afterwards.

11.5 Installing the Printer Interface Board

When reinstallation is performed from OS for DELL OptiPlex GX260 series (Windows XP) control unit (PC) models, attach the printer interface board (PEI01A board) after installation of FN-PS551 application and key registry is complete.

(1) Switch off the power to the control unit.

(2) Install the printer interface board in the control unit, then connect the printer interface cable.

(3) Turn on the control unit power.

(4) The FN-PS551 application starts, exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

(5) When the [Found New Hardware Wizard] screen is displayed, click [Next] as default setting.

(6) When the [Completing the Found New Hardware Wizard] message is displayed, click [Finish].

◆ REFERENCE ◆

Following the above mentioned procedure, the printer interface board will be properly recognized.

(7) From the [start] menu on the Windows desktop, click [All Programs], [Fuji Photo Film], and then [FN-PS551Appl] to restart the FN-PS551 application.

(8) Carry out [Test Print] from the [Utility] menu on the [FN-PS551] window and print image output from a client to check that printing is output properly.

◆ NOTE ◆

Various configuration items of FN-PS551 should be reset before checking the operation. Check for the operation of printer and client should be completed beforehand.

11.6 Setting the Language for FN-PS551 Application

To change the representative language for the FN-PS551 application to one other than English (United States), which is the factory default, follow the procedure shown below.

◆ NOTE ◆

If not changing the representative language, skip this section.

(1) Click [start] on the Windows desktop, then click [Control Panel].

(2) Click the [Date, Time, Language, and Regional Options] icon on the [Control Panel] window.

(3) Click the [Regional and Language Options] icon on the [Date, Time, Language, and Regional Options] window.

(4) Select representative language from the [Language for non-Unicode programs] drop down list under the [Advanced] tab on the [Regional and Language Options] dialog.

The representative language can be selected from the following eight alternatives.

English (United States), French (France), German (Germany), Italian (Italy), Norwegian (Bokmal), Swedish, Spanish (Spain), Danish.

◆ NOTE ◆

- Select from the eight languages listed above. Other languages are not supported.
- For the [Regional Options] and the [Language] tabs on the [Regional and Language Options] dialog, do not change from English (United States), which is set as the default.

(5) Click [OK] on the [Regional and Language Options] dialog.

(6) [Advanced] information indicating that file necessary for selected language is already installed is displayed, then click [Yes].

(7) [Change Regional Options] message is displayed to request restart, then click [Yes].

(8) After restarting, the FN-PS551 application starts automatically and the [FN-PS551] window is displayed, check that language is changed to the selected one.

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Fuji Network Print Server FN-PS551

Service Manual

INSTALLATION

Control Sheet

Issue Date	Revision	Reason	Pages Affected
10/30/98	00	New Release (FM2327)	All pages
05/12/99	01	Revision (Software ver. A02 / DICOM function expanded, etc.) (FM2442)	All pages
08/11/99	02	Revision (Software ver. A03 / IPU function added, support for PEI Board, etc.) (FM2567)	2, 11, 14, 16~19, 24~26, 28, 51
03/30/2000	03	Revision (Software ver. A04/other revisions) (FM2730)	2~6, 9, 12~17, 30, 31, 51~59
07/24/2000	04	Revision (Control unit (PC) discontinued, etc.) (FM2824)	2, 4~6, 10, 11, 14, 19~24, 34~37, 39, 41, 43
05/30/2001	05	Revision (Software ver. A05/other revisions) (FM3069)	3~6, 10, 48, 53
12/18/2001	06	Revision (Control unit (PC) discontinued, etc.) (FM3271)	2~6, 11, 14, 18, 23~44, 56
10/28/2002	07	Revision (Software ver. A07, Control Unit (PC) discontinued, etc.) (FM3487)	2~6, 10, 11, 14, 23, 24, 26~31, 33~71

Fuji Network Print Server FN-PS551

Service Manual Installation

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1. Installing Conditions

◆ NOTE ◆

The appearance, specifications, dimensions and weight of the hardware are subject to change without notice.

1.1 Dimensions and Weight

Unit	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)	Applicable model
Control unit	approx. 390	approx. 435	approx. 110	approx. 10	DELL OptiPlex GX260
Keyboard	approx. 460	approx. 175	approx. 40	approx. 1	
15-inch CRT monitor	approx. 365	approx. 385	approx. 390	approx. 12.5	DELL E551

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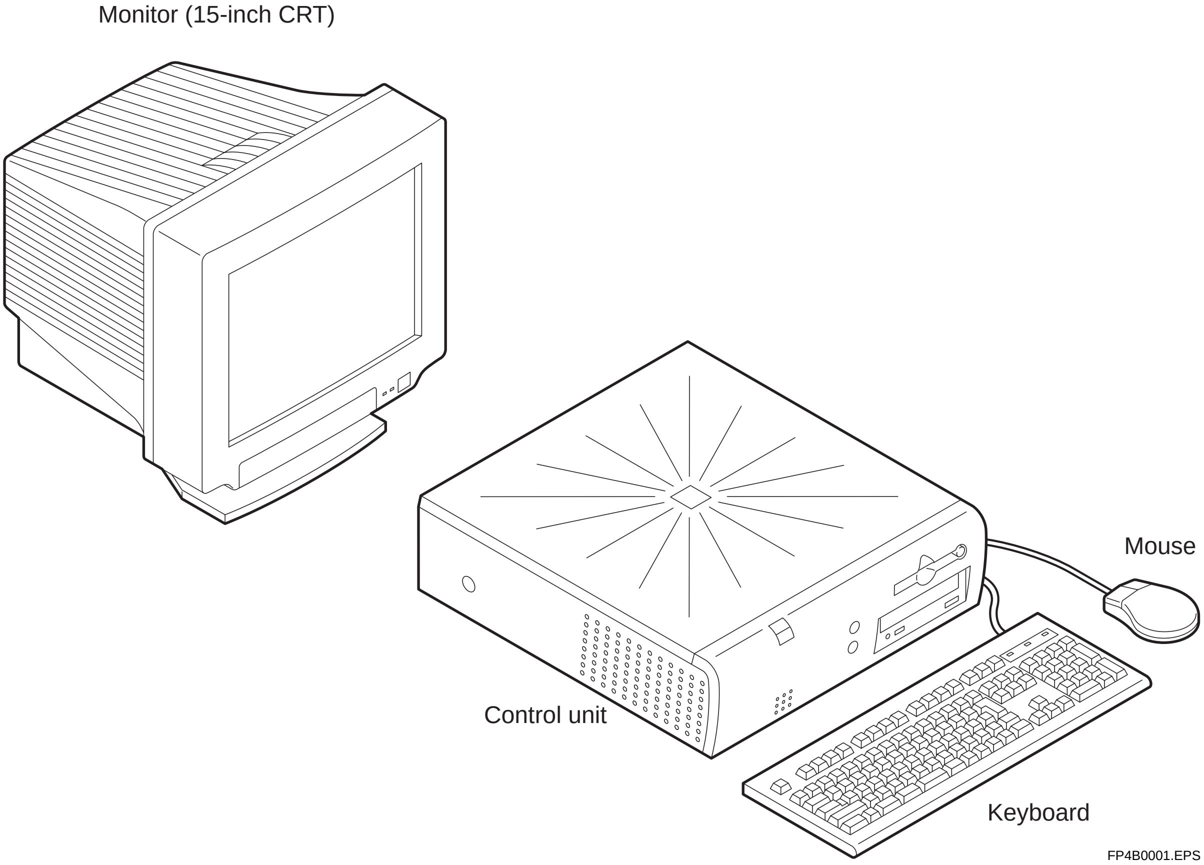
1.2 System Configuration and Connection

■ System Configuration

◆ NOTE ◆

The diagram below shows an example of parts configuration appearance. Appearance varies depending on the parts model.



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Unit	Item	Remarks
Control unit	CPU	Pentium II, Pentium III or Pentium IV 400 MHz or higher
	Main memory	128 MB or more
	Internal HDD	3.2 GB or more
	Ethernet board	10Base-T/100Base-TX
	OS	Windows NT Workstation 4.0 Windows XP Professional (DELL OptiPlex GX260 or later)
Monitor	15-inch CRT monitor	640 x 480 pix. or higher-resolution
Keyboard	English keyboard	
Mouse	Mouse	

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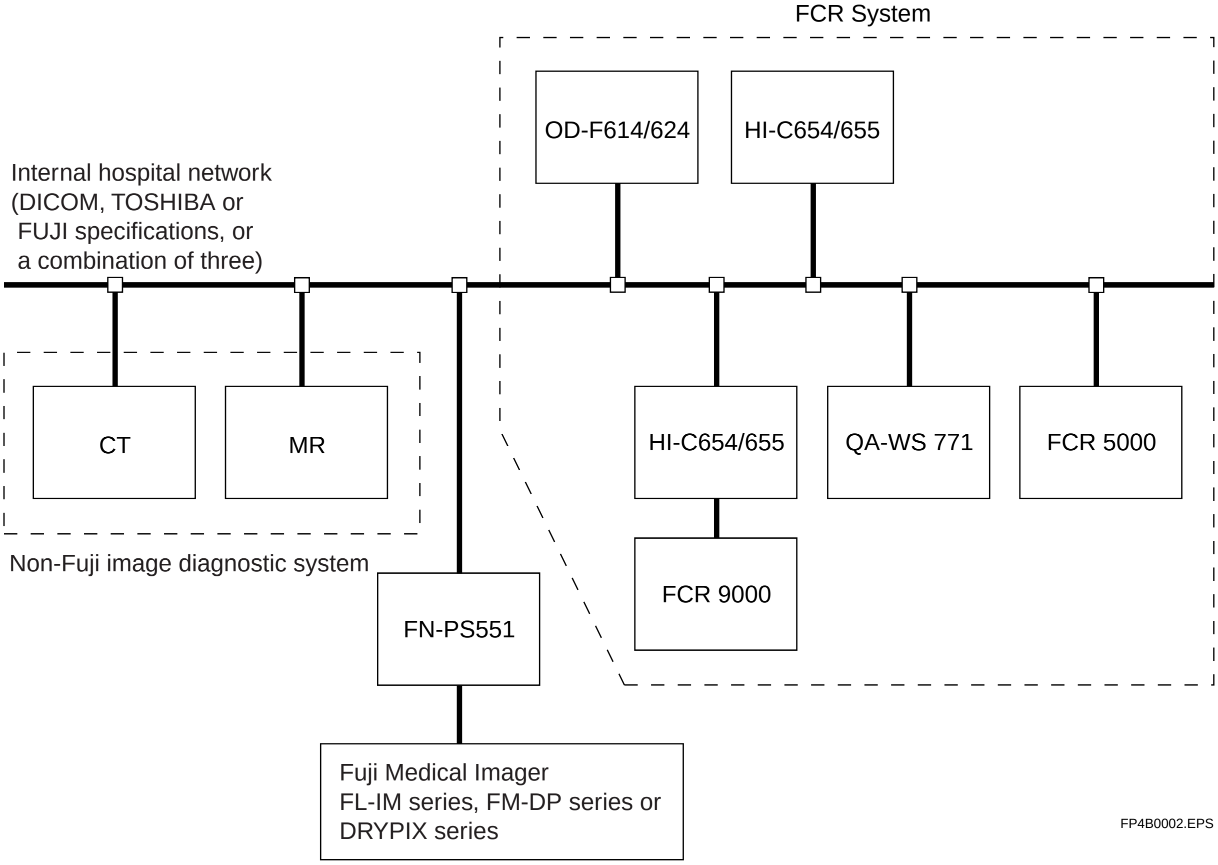
■ Example of Connection

An example of system connection is shown below.


FCR System
OD-F614/624
HI-C654/655
Internal hospital network
(DICOM, TOSHIBA or
FUJI specifications, or
a combination of three)
CT
MR
Non-Fuji image diagnostic system
HI-C654/655
QA-WS 771
FCR 5000
FCR 9000
FN-PS551
Fuji Medical Imager
FL-IM series, FM-DP series or
DRYPIX series

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FL-IM Series : FL-IM D, FL-IM DM, FL-IM3543 II, FL-IM2636 II
FL-IM3543N, FL-IM3543MN, FL-IM2636N
FM-DP Series : FM-DP2636, FM-DP3543, FM-DPL
DRYPIX Series : DRYPIX 1000, DRYPIX 3000, DRYPIX Link

◆ NOTE ◆

Network connection based on Fuji specifications (Fuji Integrated Network Protocol (FINP)) supports software ver.A03 or later. The term “Fuji protocol” in this manual later is referred to as FINP.

1.3 Temperature and Humidity

Unit	Condition	Temperature	Humidity	Applicable model
Control unit	During operation	10°C to 35°C	20% to 80 % RH (with no dew condensation)	DELL OptiPlex GX260
	Non-operation	-40°C to 65°C	20% to 80 % RH (with no dew condensation)	
15-inch CRT monitor	During operation	5°C to 40°C	10% to 80 % RH (with no dew condensation)	DELL E551
	Non-operation	-40°C to 60°C	5% to 95 % RH (with no dew condensation)	

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1.4 Power Supply Conditions

Unit	Mains Voltage/Capacity	Remarks	Applicable model
Control unit	115 or 230 V AC/approx. 0.2 kVA	Supplied from 115 or 230 V AC power outlet	DELL OptiPlex GX260
15-inch CRT monitor	115 or 230 V AC/approx. 0.2 kVA	Supplied from 115 or 230 V AC power outlet	DELL E551

TP4B0004.EPS

Phase : Single phase
Frequency : 50/60 Hz
Grounding resistance : 100 ohm or less

1.5 Environment Conditions

Do not use the equipment:

- In a location subject to extreme changes in temperature
- Near a heater or other heating elements
- In a location possibly subject to water leakage or flooding
- In the vicinity of corrosive gas
- In a dusty and/or dirty environment
- In a location subject to continuous and/or excessive vibration or shock
- In a location exposed to direct sunlight

CAUTION

In addition, the monitor should not be used:

- In a confined space such as a rack case
- In a location where the screen is exposed to strong light
- In the vicinity of electrical equipment such as a transformer, motor, or power cable generating an AC magnetic field of 0.02 Gauss or greater

1.6 Space Requirements for Installation and Maintenance

■ For installation

- A clearance of at least 10 cm behind the control unit and monitor should be provided for ventilation.
- The system can be operated with monitor, keyboard, and mouse disconnected. If using this configuration, space only for the control unit should be provided. Even with this configuration, a clearance of at least 10 cm behind the control is needed.
- The control unit can also be mounted vertically (i.e., as a mini-tower) using the floor stand.

■ For maintenance

- In addition to the space requirements set forth in the "■ For installation" aforementioned, sufficient space should be provided to allow a service engineer to operate the keyboard or mouse while observing system status on the screen.

1.7 Network Connections

To connect this unit to a network, prepare the necessary network parts and accessories and perform the preliminary installation work. Fuji does not provide network parts and accessories as part of its normal product range. These should be prepared taking the operating environment into consideration.

2. Setting Up the Equipment

2.1 Tools

- Phillips head screwdriver No. 2

2.2 Unpacking

CAUTION

During unloading, carrying-in and unpacking, take care to:

- Avoid shock and vibration.
  Strong shock or vibration during unloading or moving equipment can cause damage or faulty operation.
- Avoid abrupt changes in temperature.
  Abrupt changes in temperature during unloading or moving equipment can cause condensation inside of the equipment. Allow condensation to dry and disappear by waiting for at least one hour before turning on the power. This will prevent the possibility of faulty operation.

■ Unpacking Procedure

● Control unit

(1) Open the carton.
(2) Take out the accessories box.
(3) Remove the packaging material, then take out the control unit, keyboard, mouse, and accessories.

● Monitor

(1) Open the carton and take out the accessories.
(2) Remove the packaging material, then take out the monitor.

● Other

(1) Take out the printer interface board and printer interface cable from the box.

2.3 Checking Contents

■ Product Components

The FN-PS551 consists of the following components.

Component	Name	Q'ty	Remarks
Control unit	DICOM protocol specifications	1	Select either one according to specifications of installation site (including the monitor) (IPU specifications support software ver. A03 or later)
	TOSHIBA protocol specifications	1	
	IPU specifications	1	
Printer I/F board	E-I/F board	1 to 2	Max. two
Printer I/F cable	E-I/F cable	1 to 2	Max. two
Other options	E-I/F connector/converter cable	1 to 2	Required when using existing E-I/F cable (with normal-size connectors at both ends)
	DICOM protocol software	1	Software for FN-PS551 application and DICOM protocol key registry
	TOSHIBA protocol software	1	Software for FN-PS551 application and TOSHIBA protocol key registry
	IPU Specifications Software	1	Software for FN-PS551 application and IPU key registry (IPU specifications support software ver. A03 or later)
	DICOM protocol key registry software	1	Used to add DICOM protocol
	TOSHIBA protocol key registry software	1	Used to add TOSHIBA protocol
	IPU Key Registry Software	1	Used to add IPU function (IPU specifications support software ver. A03 or later)
	PEM Key Registry Software	1	Used to add PEM (Pattern enhancement processing for mammography) function for IPU specifications (PEM function support software ver. A04 or later)
	Power cords (EU specs)	2	Separate cables for control unit and monitor
	Power cords (UK specs)	2	Separate cables for control unit and monitor

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■ Component List

Each component consists of the following parts.

- DICOM Protocol Specifications Control Unit

Product Code	Part	Q'ty	Remarks
FN-PS551 D ** E (** Product code varies with requirements including hardware specifications, and software version)	Control unit (Windows NT 4.0 or Windows XP Professional English version, Memory 128 MB or more, HDD 3.2 GB or more)	1	FN-PS551 application software and DICOM protocol key registry software installed at factory
	English keyboard	1	
	Mouse	1	
	Control unit power cord	1	AC 100 to 120 V
	15-inch CRT monitor	1	With video cable
	CRT monitor power cord	1	AC 100 to 120 V
	FN-PS551 application software (CD-ROM)	1	
	DICOM protocol key registry software(FD)	1	
	Accessories (including operation manual)	1	

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- TOSHIBA Protocol Specifications Control Unit

Product Code	Part	Q'ty	Remarks
FN-PS551 T ** E (** Product code varies with requirements including hardware specifications, and software version)	Control unit (Windows NT 4.0 or Windows XP Professional English version, Memory 128 MB or more, HDD 3.2 GB or more)	1	FN-PS551 application software and TOSHIBA protocol key registry software installed at factory
	English keyboard	1	
	Mouse	1	
	Control unit power cord	1	AC 100 to 120 V
	15-inch CRT monitor	1	With video cable
	CRT monitor power cord	1	AC 100 to 120 V
	FN-PS551 application software (CD-ROM)	1	
	TOSHIBA protocol key registry software (FD)	1	
	Accessories (including operation manual)	1	

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- IPU Specifications Control Unit (supporting software ver. A03 or later)

Product Code	Part	Q'ty	Remarks
FN-PS551 IPU ** E (** Product code varies with requirements including hardware specifications, and software version)	Control unit (Windows NT 4.0 or Windows XP Professional English version, Memory 128 MB or more, HDD 3.2 GB or more)	1	FN-PS551 application software and IPU key registry software installed at factory
	English keyboard	1	
	Mouse	1	
	Control unit power cord	1	AC 100 to 120 V
	15-inch CRT monitor	1	With video cable
	CRT monitor power cord	1	AC 100 to 120 V
	FN-PS551 application software (CD-ROM)	1	
	IPU key registry software (FD)	1	
	Accessories (including operation manual)	1	

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- Printer Interface Board (E-I/F for ISA bus)

Product Code	**Part**	**Q'ty**	**Remarks**
E-IF BD FOR ISA E	DXA01A board	1	Not usable in DELL OptiPlex GX110/GX150/GX260 series control unit (PC) models

TP4B0008.EPS

- Printer Interface Board (E-I/F for PCI bus) (supporting software ver. A03 or later)

Product Code	**Part**	**Q'ty**	**Remarks**
E-IF BD FOR PCI E	PEI01A board	1	

TP4B0028.EPS

- Printer Interface Cable (E-I/F)

Product Code	**Part**	**Q'ty**	**Remarks**
ODF/PS IF CABLE ** M E (** indicates the cable length)	Printer interface cable (available in 5/15/30/45/60/100/150 m)	1	Connect half-pitch connector to FN-PS

TP4B0009.EPS

- Printer Interface Connector/Converter Cable (E-I/F)

Product Code	**Part**	**Q'ty**	**Remarks**
MF-PS 667/DMS IF CABLE E	Printer interface connector/converter cable (1.2 m)	1	Used in conjunction with existing E-I/F cable (which has normal-size connectors at both ends). Connect this cable to the FN-PS using the half-pitch connector/converter

TP4B0010.EPS

- Control Unit Expanded Memory

Product Code	**Part**	**Q'ty**	**Remarks**
FN-PS 551 AD MEM 128MB E	Expanded memory (128MB)	1	This is necessary to cope with performance deterioration when a large volume image data is received. This applies to DELL OptiPlex GX110/GX150 series control unit (PC) models.

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- DICOM Protocol Software

Product Code	Part	Q'ty	Remarks
FN-PS551 DICOM SOFT A** E (** Product code varies with requirements including software version)	FN-PS551 application software (CD-ROM)	1	
	DICOM protocol key registry software (FD)	1	

TP4B0011.EPS

- TOSHIBA Protocol Software

Product Code	Part	Q'ty	Remarks
FN-PS551 TOSHIBA SOFT A** E (** Product code varies with requirements including software version)	FN-PS551 application software (CD-ROM)	1	
	TOSHIBA protocol key registry software (FD)	1	

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- IPU Specifications Software (supporting software ver. A03 or later)

Product Code	Part	Q'ty	Remarks
FN-PS551 IPU SOFT A** E (** Product code varies with requirements including software version)	FN-PS551 application software (CD-ROM)	1	
	IPU key registry software (FD)	1	

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- DICOM Protocol Key Registry Software

Product Code	Part	Q'ty	Remarks
FN-PS551 DICOM KEY SOFT E	DICOM protocol key registry software (FD)	1	Required when adding DICOM protocol specifications to a non-DICOM specifications FN-PS551

TP4B0013.EPS

- TOSHIBA Protocol Key Registry Software

Product Code	Part	Q'ty	Remarks
FN-PS551 TOSHIBA KEY SOFT E	TOSHIBA protocol key registry software (FD)	1	Required when adding TOSHIBA protocol specifications to a non-TOSHIBA specifications FN-PS551

TP4B0014.EPS

- IPU Key Registry Software (supporting software ver. A03 or later)

Product Code	Part	Q'ty	Remarks
FN-PS551 IPU KEY SOFT E	IPU key registry software (FD)	1	Required when adding IPU function to a non-IPU specifications FN-PS551

TP4B0027.EPS

- PEM Key Registry Software (supporting software ver. A04 or later)

Product Code	Part	Q'ty	Remarks
FN-PS551 PEM KEY SOFT E	PEM key registry software (FD)	1	Required when adding PEM (Pattern enhancement processing for mammography) function to a IPU specifications

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- Power Cords (EU specs)

Product Code	Part	Q'ty	Remarks
HIC 655 POWER CORD EU 200 V E	Power cord (EU specs)	1	For AC 220 to 230 V power supplies

TP4B0015.EPS

- Power Cords (UK specs)

Product Code	Part	Q'ty	Remarks
HIC 655 POWER CORD UK 200 V E	Power cord (UK specs)	1	For AC 240 V power supplies

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2.4 Printer Interface Board Settings

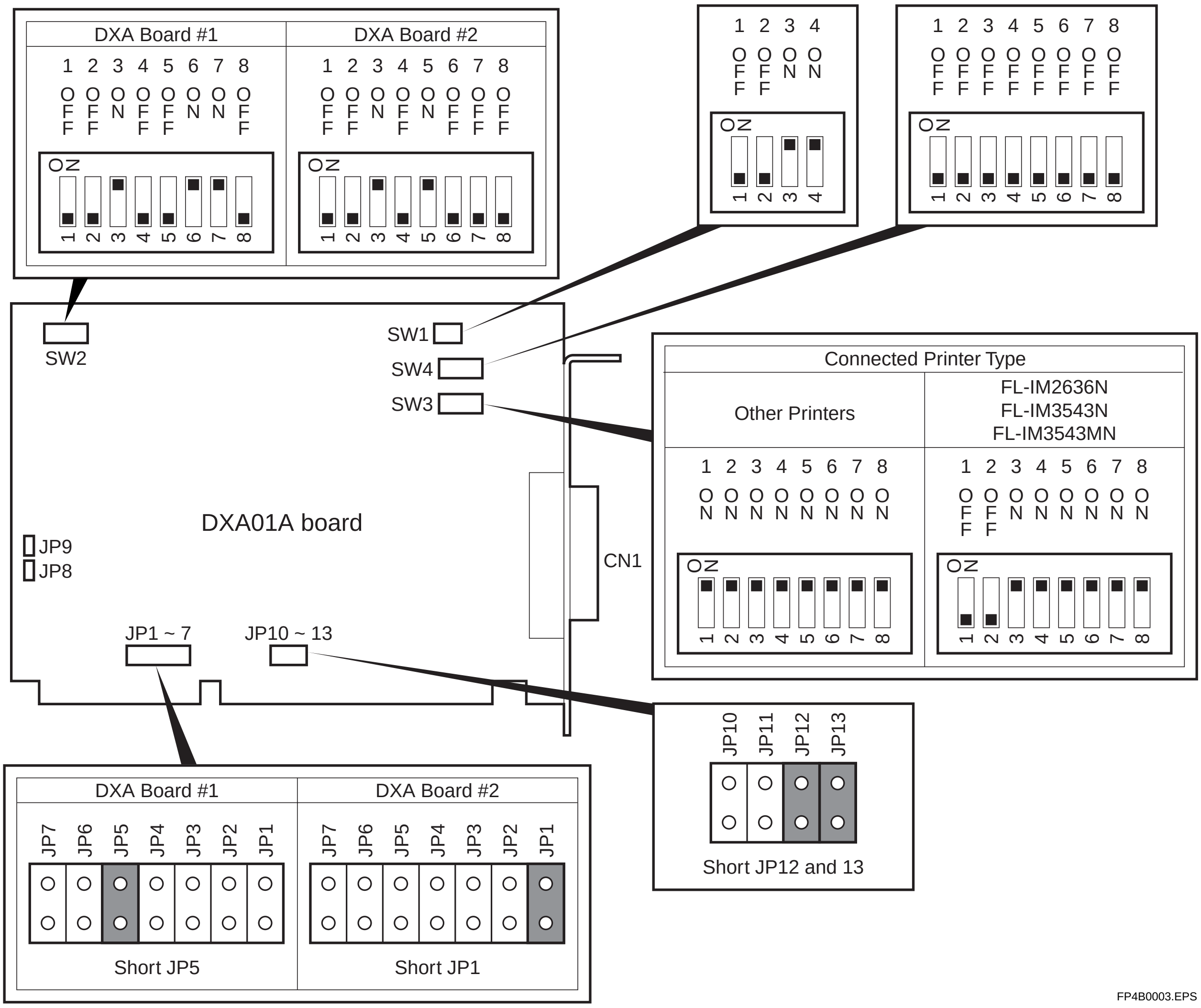
CAUTION

- Be sure to wear a wristband for grounding when performing install of boards. Otherwise static electricity in the body may cause damage to electronic parts on the boards.
- For DELL OptiPlex GX110/GX150/GX260 series control unit (PC) models, expansion slots are constructed only on PCI bus, so a DXA01A board can not be used. In this case, use a PEI01A board.

A maximum of two E-I/F (DXA01A board or PEI01A board) boards can be connected. Set the jumpers and dip switches according to procedures described as shown below. If a DXA01A board and PEI01A board are to be used concurrently, set one board as the first board, and the other as the second board.

■ DXA01A Board (for ISA bus)

- DXA Board #1 shows the correct settings of the first DXA01A board (or for the sole DXA01A board if only one is used) .
- DXA Board #2 shows the correct settings of the second DXA01A board.


DXA Board #1
1 2 3 4 5 6 7 8
OFF OFF ON OFF OFF ON ON OFF
DXA Board #2
1 2 3 4 5 6 7 8
OFF OFF ON OFF ON OFF OFF OFF
ON
1 2 3 4
OFF OFF ON ON
1 2 3 4 5 6 7 8
OFF OFF OFF OFF OFF OFF OFF OFF
SW2
SW1
SW4
SW3
DXA01A board
JP9
JP8
JP1 ~ 7
JP10 ~ 13
CN1
Connected Printer Type
Other Printers
FL-IM2636N
FL-IM3543N
FL-IM3543MN
1 2 3 4 5 6 7 8
ON ON ON ON ON ON ON ON
1 2 3 4 5 6 7 8
OFF OFF ON ON ON ON ON ON
JP10 JP11 JP12 JP13
Short JP12 and 13
DXA Board #1
JP7 JP6 JP5 JP4 JP3 JP2 JP1
Short JP5
DXA Board #2
JP7 JP6 JP5 JP4 JP3 JP2 JP1
Short JP1

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SW1 Settings

No.	Function	Setting	Description
1	Remote signal switching	OFF	• To input remote signal from an external device, set 1 and 2 to ON and 3 and 4 to OFF • To enable software control and to send remote signal to an external device, set 1 and 2 to OFF and 3 and 4 to ON (Settings for This FN-PS551)
2		OFF	
3		ON	
4		ON	

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SW2 Settings

No.	Function	Setting		Description
		#1	#2	
1	Unused	OFF	OFF	
2	Unused	OFF	OFF	
3	IO address SA9	ON	ON	Set IO spatial address: For DXA Board #1, set 3 (SA9), 6 (SA6), and 7 (SA5) to ON For DXA Board #2, set 3 (SA9) and 5 (SA7) to ON
4	IO address SA8	OFF	OFF	
5	IO address SA7	OFF	ON	
6	IO address SA6	ON	OFF	
7	IO address SA5	ON	OFF	
8	Unused	OFF	OFF	

TP4B0018.EPS

SW3 and SW4 Settings

	No.	Function	Setting	Description
SW3	1 to 8	Switching Between A and B devices	All ON *	• A device = SW3 all ON and SW4 all OFF(Settings for This FN-PS551) * When the printers indicated below are connected, set 1 and 2 to OFF and 3 to 8 to ON of SW3 FL-IM2636N, FL-IM3543N, FL-IM3543MN • B device=SW3 all OFF and SW4 all ON
SW4	1 to 8		All OFF	

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Jumper Pin (JP1 to JP13) Settings

No.	Function	Setting		Description
		#1	#2	
1	ISA interrupt select IRQ10		Short	Select ISA interrupt line: Choose one of 1 to 7 For DXA Board #1, choose 5 (IRQ5) For DXA Board #2, choose 1 (IRQ10)
2	ISA interrupt select IRQ11			
3	ISA interrupt select IRQ12			
4	ISA interrupt select IRQ15			
5	ISA interrupt select IRQ5	Short		
6	ISA interrupt select IRQ4			
7	ISA interrupt select IRQ3			
8	Hardware settings			Disables FPGA clock selection (JP8 = 16 MHz, JP9 = 32 MHz) (no jumper post)
9	Hardware settings			
10	E-I/F parity setting			• 10 and 11 shorted = EVEN parity • 12 and 13 shorted = ODD parity (Settings for This FN-PS551)
11	E-I/F parity setting			
12	E-I/F parity setting	Short	Short	
13	E-I/F parity setting	Short	Short	

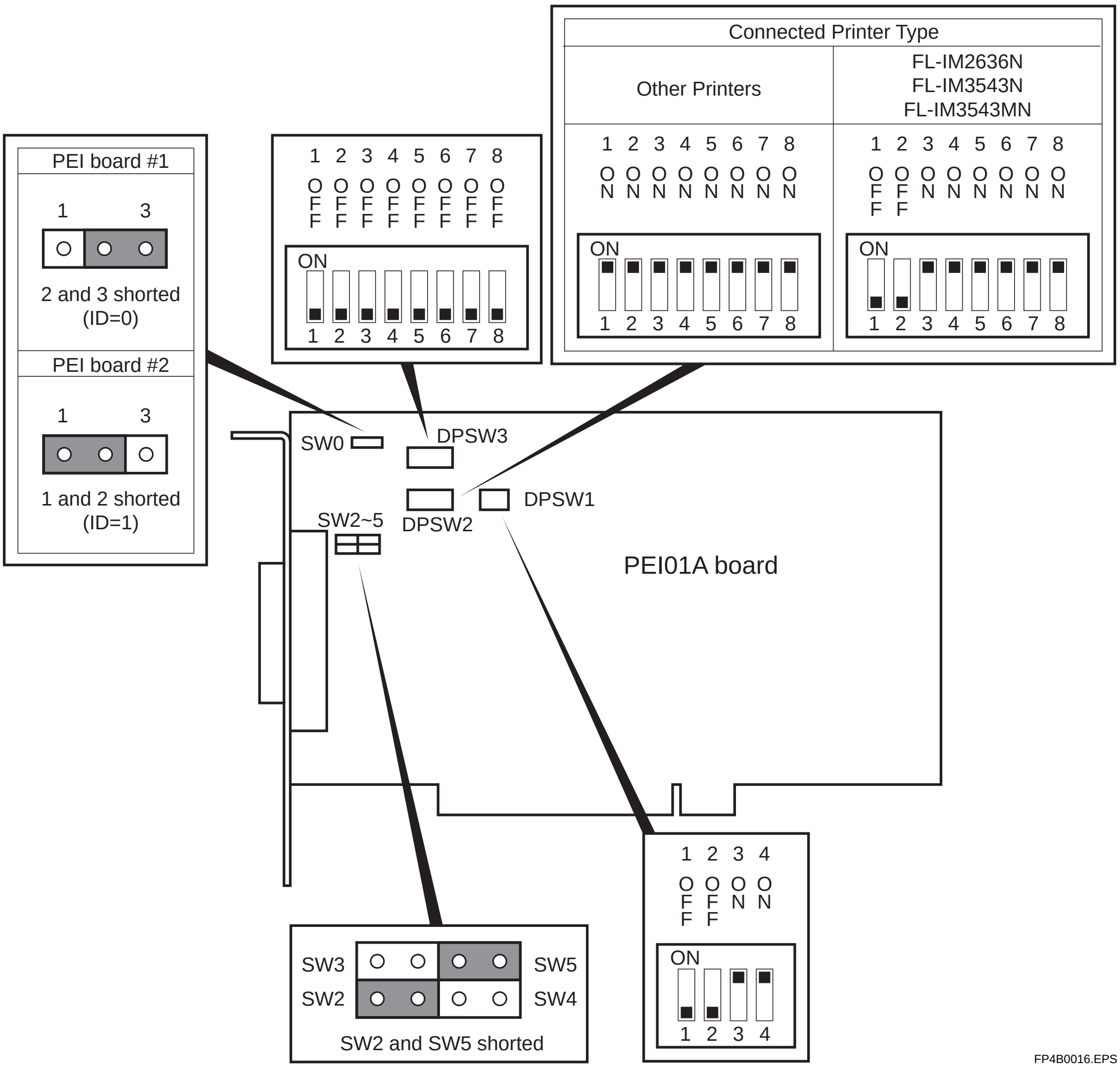
TP4B0020.EPS

■ PEI01A Board (for PCI bus)

CAUTION

- The control unit (PC) must be set to use a PEI01A board. If the PEI01A board is used without the setting, it causes a Printer error (Source Name: EifPrDrv, Event 2: SMCU Driver error, Event 3: EIFIMG Driver error).
- If the last four digits of the SERIAL NUMBER of the control unit is “2247” or later, the setting of the control unit to use a PEI01A board has already been performed at a factory. If a PEI01A board is to be used on the control unit with “2246” or earlier, refer to “9. Setting the Control Unit (PC) to Use PEI01A Board” in the “FN-PS551 Service Manual: MAINTENANCE” to set the control unit.

- When using only one board, make sure to set it according to the “PEI board #1”.
- When using two boards, set the first and the second board according to the “PEI board #1” and the “PEI board #2”, respectively.


PEI board #1
1 3
2 and 3 shorted
(ID=0)
PEI board #2
1 3
1 and 2 shorted
(ID=1)
1 2 3 4 5 6 7 8
OFF OFF OFF OFF OFF OFF OFF OFF
ON
1 2 3 4 5 6 7 8
Connected Printer Type
Other Printers
FL-IM2636N
FL-IM3543N
FL-IM3543MN
1 2 3 4 5 6 7 8
ON ON ON ON ON ON ON ON
ON
1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8
OFF OFF ON ON ON ON ON ON
ON
1 2 3 4 5 6 7 8
SW0
DPSW3
DPSW1
DPSW2
SW2~5
PEI01A board
SW3
SW2
SW5
SW4
SW2 and SW5 shorted
1 2 3 4
OFF OFF ON ON
ON
1 2 3 4

FP4B0016.EPS

DPSW1 Settings

No.	Function	Setting	Description
1	Remote signal switching	OFF	• To input remote signal from an external device, set 1 and 2 to On and 3 and 4 to OFF • To enable software control and to send remote signal to an external device, set 1 and 2 to OFF and 3 and 4 to ON (Settings for this FN-PS551)
2		OFF	
3		ON	
4		ON	

TP4B0029.EPS

DPSW2 and DPSW3 Settings

	No.	Function	Setting	Description
DPSW2	1 to 8	Switching Between A and B devices	All ON *	• A device=DPSW2 all ON and DPSW3 all OFF (Settings for this FN-PS551) * When the printers indicated below are connected, set 1 and 2 to OFF and 3 to 8 to ON of DPSW2 FL-IM2636N, FL-IM3543N, FL-IM3543MN • B device=DPSW2 all OFF and DPSW3 all ON
DPSW3	1 to 8		All OFF	

TP4B0030.EPS

SW0 Settings

No.	Function	Setting		Description
		#1	#2	
1-2	Board ID=1		Short	• For PEI board #1, 2 and 3 shorted
2-3	Board ID=0	Short		• For PEI board #2, 1 and 2 shorted

TP4B0031.EPS

SW2, SW3, SW4 and SW5 Settings

	Function	Setting	Description
SW2	E-I/F parity setting	Short	• SW3 and SW4 shorted=EVEN parity • SW2 and SW5 shorted=ODD parity (Settings for this FN-PS551)
SW3	E-I/F parity setting		
SW4	E-I/F parity setting		
SW5	E-I/F parity setting	Short	

TP4B0032.EPS

2.5 Installing the Printer Interface Board

Install one or two E-I/F (DXA01A or PEI01A) boards in the control main unit.

WARNING

To prevent electric shock and/or damage to the control unit, always switch off the power to the control unit and remove the power cord before attempting installation or removal of parts.
Power is continually flowing through the unit while the power cord is connected to the socket.

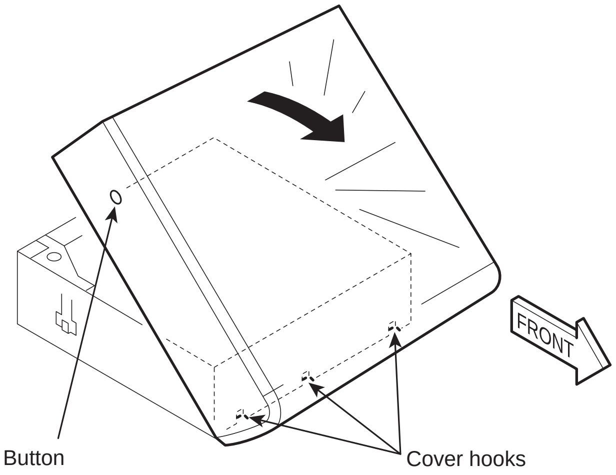
CAUTION

Before beginning, touch the metal plate at the rear of the control unit to discharge static electricity from the body.
In addition be sure to wear a wristband for grounding when performing install of boards.
Otherwise static electricity in the body may cause damage to electronic parts on the boards and the control unit.

■ For GX1/GX110 Series Control Unit

- Remove the Control Main Unit Cover

(1) Swing the cover up and forward by pressing and holding the two buttons on the left and right sides of the control unit as illustrated.



FP4B0004.EPS

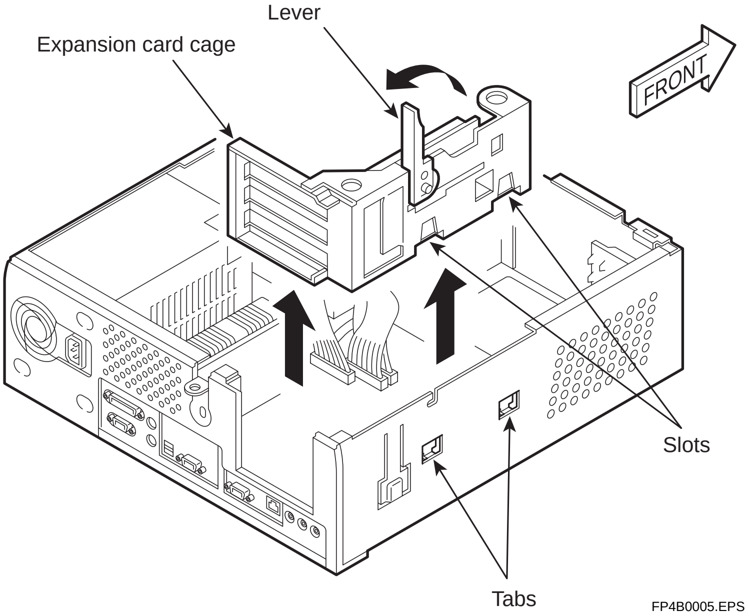
(2) Remove the three cover hooks from their holes on the lower front part of the chassis.

(3) Lift the cover of the control unit up and remove it from the chassis.

- Remove the Expansion Card Cage

(1) Rotate the card cage lever upwards until it stops at a vertical position as illustrated.

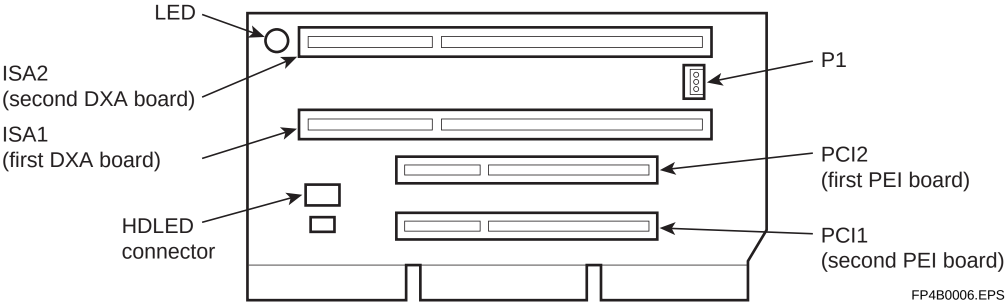
(2) Lift up the expansion card cage to remove it from the chassis.


Lever
Expansion card cage
FRONT
Slots
Tabs
FP4B0005.EPS

- Install the E-I/F Board

Install the E-I/F board in the ISA or PCI bus slot of the expansion card cage riser board (expansion slot board).

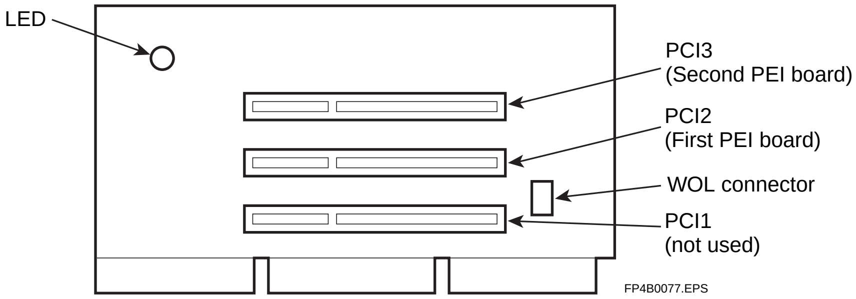
- Slot layout on the riser board (expansion slot board)
  (For a DELL OptiPlex GX1 series control unit model)


LED
ISA2
(second DXA board)
ISA1
(first DXA board)
HDLED
connector
P1
PCI2
(first PEI board)
PCI1
(second PEI board)
FP4B0006.EPS

◆ NOTE ◆

- ISA1 and PCI2 bus slot are shared, and therefore, cannot use them at the same time.
- When using DXA01A and PEI01A boards concurrently, install one board in the first slot (ISA1 or PCI2) and the other in the second slot (ISA2 or PCI1).

- Slot layout on the riser board (expansion slot board)
  (For a DELL OptiPlex GX110 series control unit model)


LED
PCI3
(Second PEI board)
PCI2
(First PEI board)
WOL connector
PCI1
(not used)
FP4B0077.EPS

◆ NOTE ◆

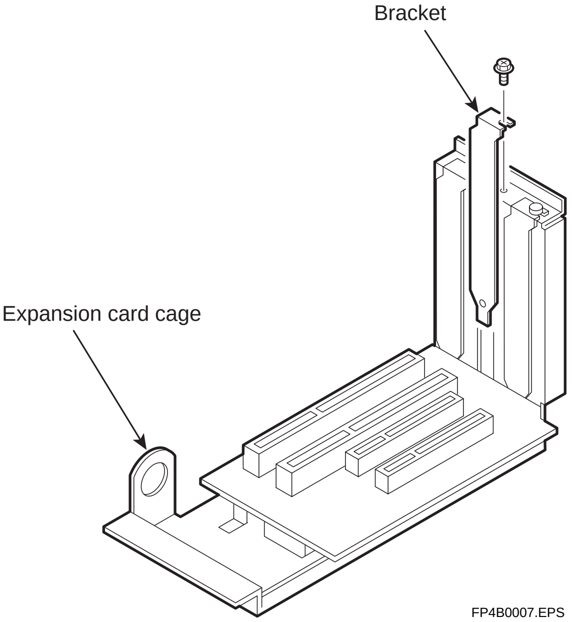
- For a DELL OptiPlex GX110 series control unit (PC) model, expansion slots are constructed only on PCI bus, so a DXA01A board can not be used. In this case, use a PEI01A board.
- If it is installed in PCI1 slot, PEI01A board touches the cables and connectors inside the control unit, so it should not be used in this slot.

◆ REFERENCE ◆

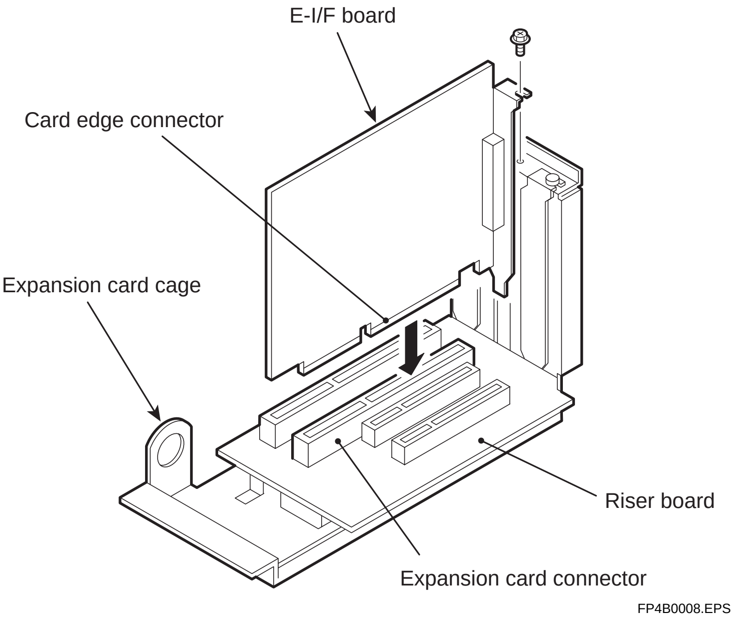
The illustrations of the following board installation procedure shows the case for a DELL OptiPlex GX1 series control unit model, however, the same procedure is used for a GX110 series, too.

(1) Loosen and remove the retaining screw for the metal bracket covering the expansion card slot.

Use this removed screw again when attacing the E-I/F board.


Bracket
Expansion card cage
FP4B0007.EPS

(2) Insert the E-I/F board card edge connector into the riser board expansion card connector firmly but gently.


E-I/F board
Card edge connector
Expansion card cage
Riser board
Expansion card connector
FP4B0008.EPS

(3) Align the board retaining bracket in place, then secure it using the screw removed in step (1).

● Install the Expansion Card Cage

Install the expansion card cage in the reverse order of the removal procedure.

◆ REFERENCE ◆

Refer to the illustrations in “● Remove the Expansion Card Cage”.

(1) With the card cage lever in the vertical position, align the slots on the left side of the expansion card cage with the tabs on the left side panel of the chassis.

(2) Rotate the card cage lever downwards until it stops at a horizontal position.
Check that the riser board is pushed down fully into the riser connector on the system board.

● Re-attach Control Main Unit Cover

Re-attach the control main unit cover in the reverse order of the removal procedure.

◆ REFERENCE ◆

Refer to the illustrations in “● Remove the Control Main Unit Cover”.

(1) Check that no parts such as screws are left inside the control unit, and that internal cable are stowed out of the way.

(2) Align the front of the cover with the front of the control unit. Align the three cover hooks with the holes at the lower front part of the chassis.

◆ REFERENCE ◆

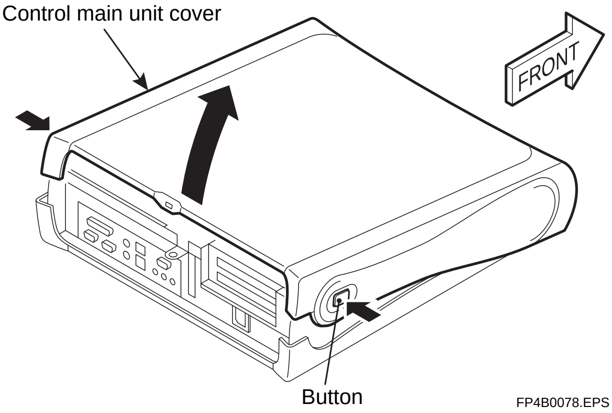
It is easier to check that the hooks are aligned at their designated positions by looking straight down on the chassis from above.

(3) Gently lower the control main unit cover into its designated position on the chassis.
→ Press down the cover until the two cover buttons click into position.

■ For GX150/GX260 Series Control Unit

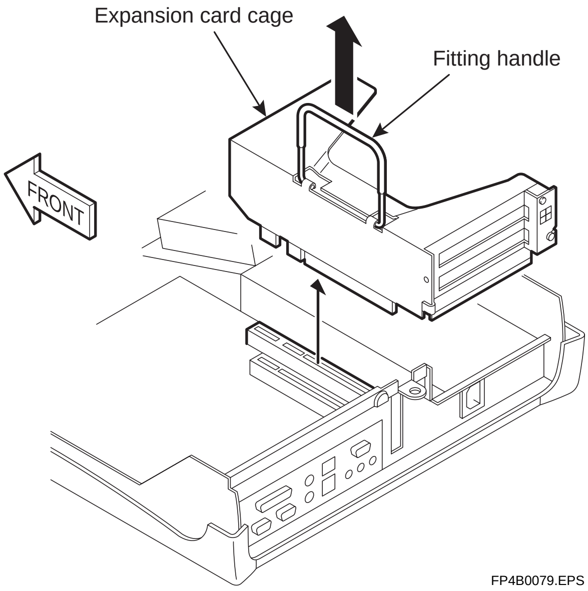
● Remove the Control Main Unit Cover

Press and hold in the two buttons on the left and right sides of the control unit as illustrated, and swing the cover up and forward till it stops at a vertical position.


Control main unit cover
FRONT
Button
FP4B0078.EPS

● Remove the Expansion Card Cage

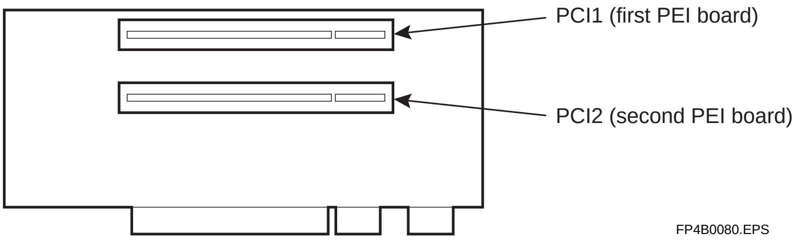
Lift up the expansion card cage by holding the card cage fitting handle, and remove it from the chassis.


Expansion card cage
Fitting handle
FRONT
FP4B0079.EPS

● Install the E-I/F Board

Install the E-I/F board in the PCI bus slot of the expansion card cage riser board (expansion slot board).

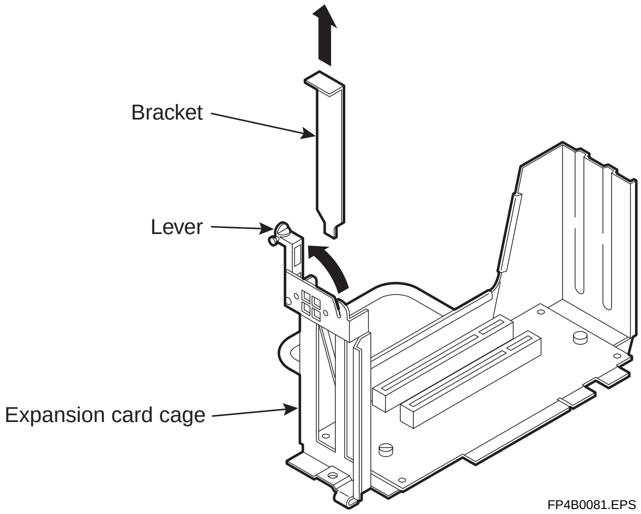
- Slot layout on the riser board (expansion slot board)
  (For DELL OptiPlex GX150/GX260 series control unit models)


PCI1 (first PEI board)
PCI2 (second PEI board)
FP4B0080.EPS

◆ NOTE ◆

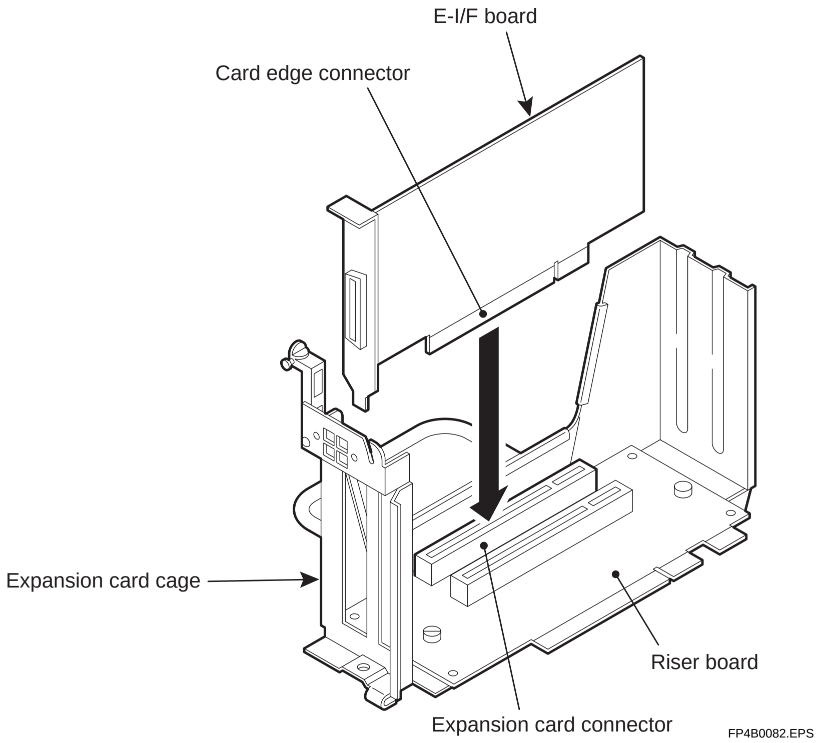
For DELL OptiPlex GX150/GX260 series control unit (PC) models, expansion slots are constructed only on PCI bus, so a DXA01A board can not be used. In this case, use a PEI01A board.

(1) Pull up the lever to the outside of the slot.


Bracket
Lever
Expansion card cage
FP4B0081.EPS

(2) Remove the metal bracket covering the opening for the expansion card slot to be used.

(3) Insert the E-I/F board card edge connector into the riser board expansion card connector firmly but gently.


E-I/F board
Card edge connector
Expansion card cage
Riser board
Expansion card connector
FP4B0082.EPS

(4) Push down the lever and fix the E-I/F board onto the expansion card cage.

● Install the Expansion Card Cage

Install the expansion card cage in the reverse order of the removal procedure.

◆ REFERENCE ◆

Refer to the illustrations in "●Remove the Expansion Card Cage".

(1) Align the slots on the side of the expansion card cage with the tabs on the side of the chassis, and push down the expansion card cage while sliding it.

(2) Check that the riser board is pushed down fully into the RISER connector on the system board.

● Re-attach the Control Main Unit Cover

Re-attach the control main unit cover in the reverse order of the removal procedure.

◆ REFERENCE ◆

Refer to the illustrations in "●Remove the Control Main Unit Cover".

(1) Check that no parts such as screws are left inside the control unit, and that internal cables are stowed out of the way.

(2) Gently lower the control main unit cover into its designated position on the chassis.
→ Press down the cover until the two cover buttons click into position.

2.6 Attaching the Floor Stand

◆ **NOTE** ◆

Skip this section if installing the control unit sideways.

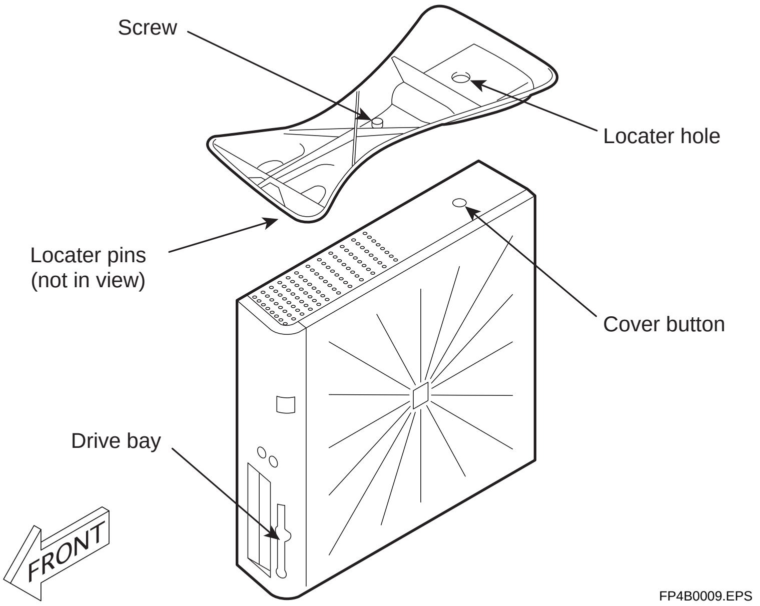
The control unit can be placed either horizontally or vertically (i.e., as a mini-tower). If installing the control unit vertically, attach the floor stand provided.

◆ **NOTE** ◆

Attachment procedure for the floor stand explained below assumes DELL OptiPlex GX1/GX110 series control unit models are being used. Follow a similar procedure for GX150/GX260 series, too.

(1) Place the control main unit vertically on its right side with the drive bay at the bottom.

(2) Attach the floor stand to the left side of the control main unit.
- Align the locator hole (positioning hole) in the floor stand with the cover button on the left side of the control main unit. Then align the screw in the floor stand with the screw hole on the control main unit.
- The locator pin on the floor stand should fit properly into the square holes on the control unit.
- When the stand is properly aligned, tighten the screw firmly.



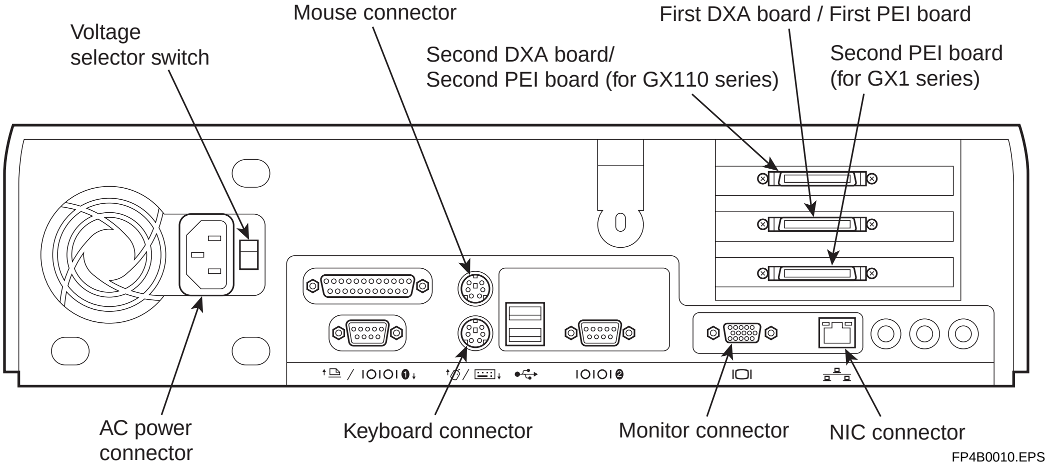
(3) Turn the control main unit upside down so that it sits on the floor stand and the drive bay faces up.

2.7 Connecting Cables

◆ NOTE ◆

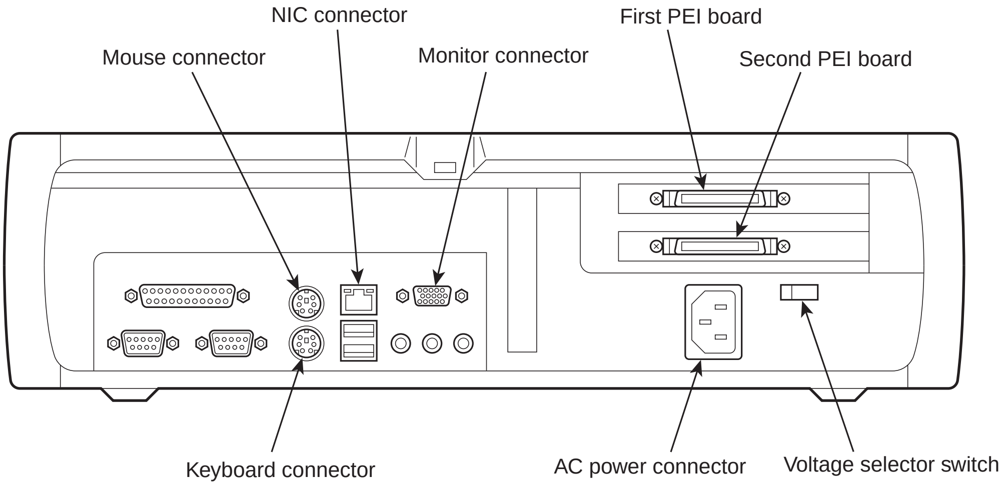
A maximum of two E-I/F boards can be connected. The illustration shown below is a reference to indicate the connection location. However, for DELL OptiPlex GX110/GX150/GX260 series control unit models, a DXA01A board can not be used.

- Layout on the control main unit rear panel (For DELL OptiPlex GX1/GX110 series control unit models)


Voltage selector switch
Mouse connector
Second DXA board/ Second PEI board (for GX110 series)
First DXA board / First PEI board
Second PEI board (for GX1 series)
AC power connector
Keyboard connector
Monitor connector
NIC connector

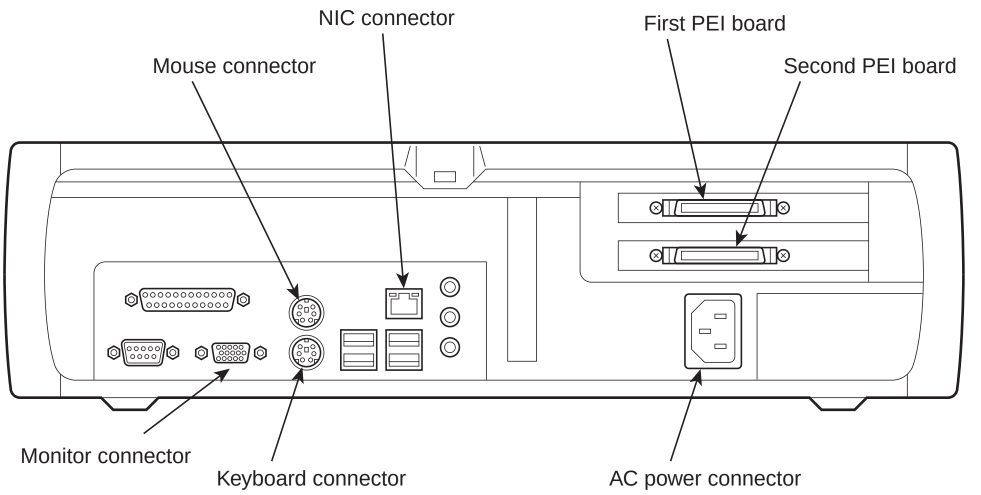
FP4B0010.EPS

- Layout on the control main unit rear panel (For a DELL OptiPlex GX150 series control unit model)


NIC connector
Mouse connector
Monitor connector
First PEI board
Second PEI board
Keyboard connector
AC power connector
Voltage selector switch

FP4B0083.EPS

- Layout on the control main unit rear panel
  (For a DELL OptiPlex GX260 series control unit model)

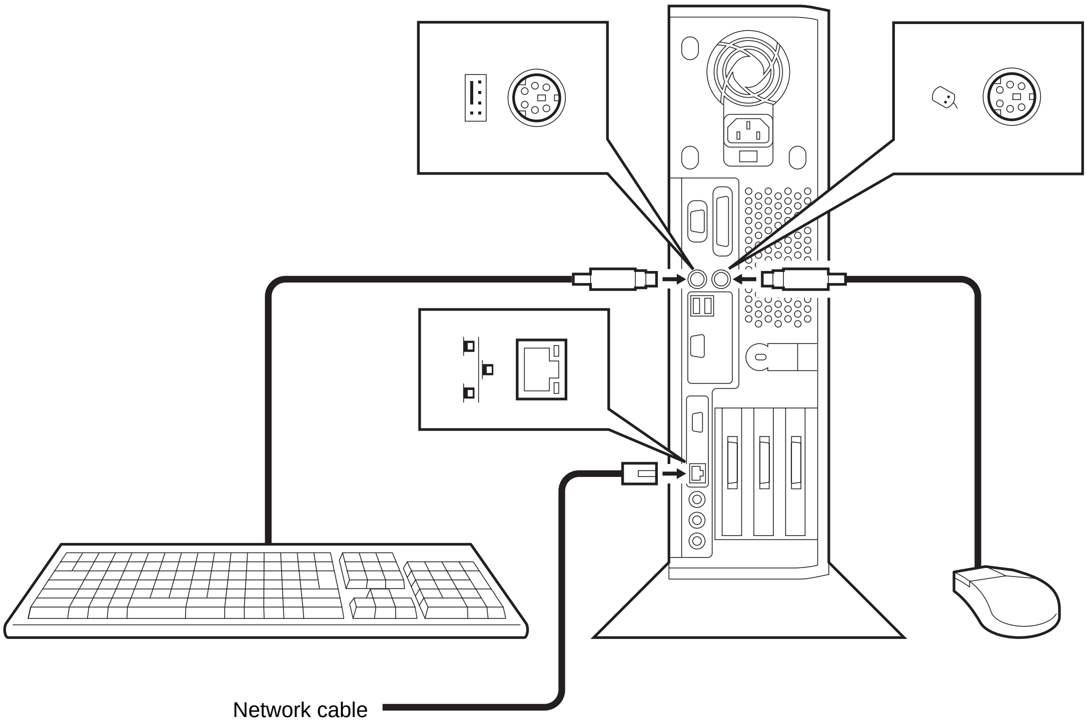

NIC connector
First PEI board
Mouse connector
Second PEI board
Monitor connector
Keyboard connector
AC power connector

FP4B0096.EPS

◆ NOTE ◆

Cable connection procedures in the following are explained assuming that the control unit model is of DELL OptiPlex GX1/GX110 series, however, a similar procedure is used for GX150/GX260 series, too. Note that layout of cable connection positions on the rear panel and voltage selector switch differs between GX1/GX110 series and GX150/GX260 series.

(1) Connect the keyboard, mouse, and network cable to their respective I/O ports on the rear panel of the control unit.

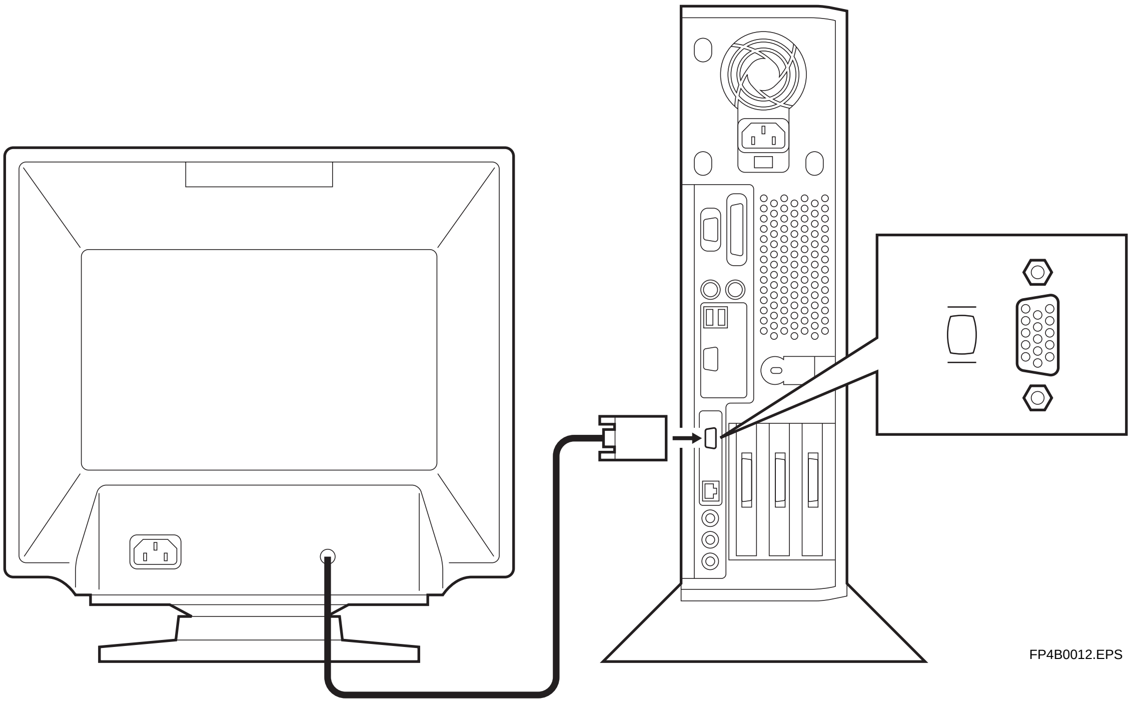


FP4B0011.EPS

◆ NOTE ◆

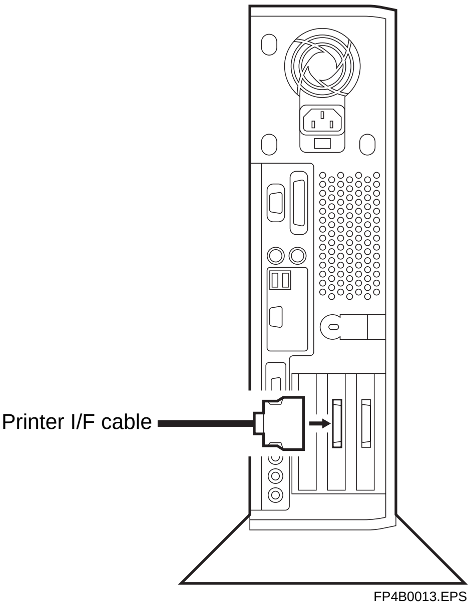
Ensure that the mouse and keyboard are connected to the appropriate ports because they have the same shaped connectors. Mouse and keyboard cannot be operated if they are incorrectly connected.

(2) Connect the CRT monitor cable connector to the monitor connector I/O port.



FP4B0012.EPS

(3) Connect the printer cable connector to the E-I/F board connector.



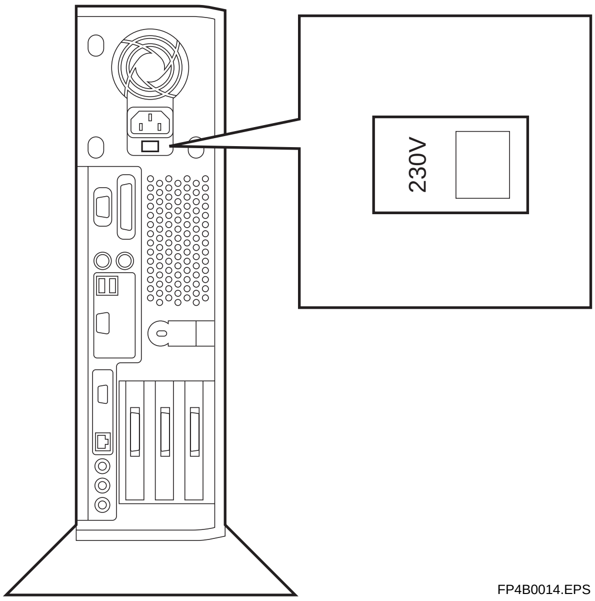
◆ NOTE ◆

To use an existing E-I/F cable with normal-sized connectors at both ends, attach the optional extra E-I/F connector converter cable before connecting to the E-I/F board.

(4) Check that the voltage selector switch (located to the right of the AC power connector) is set to the correct voltage (115 V for 100 to 120 V AC power supply or 230 V for 200 to 240 V AC power supply). The factory default is 230 V.

◆ NOTE ◆

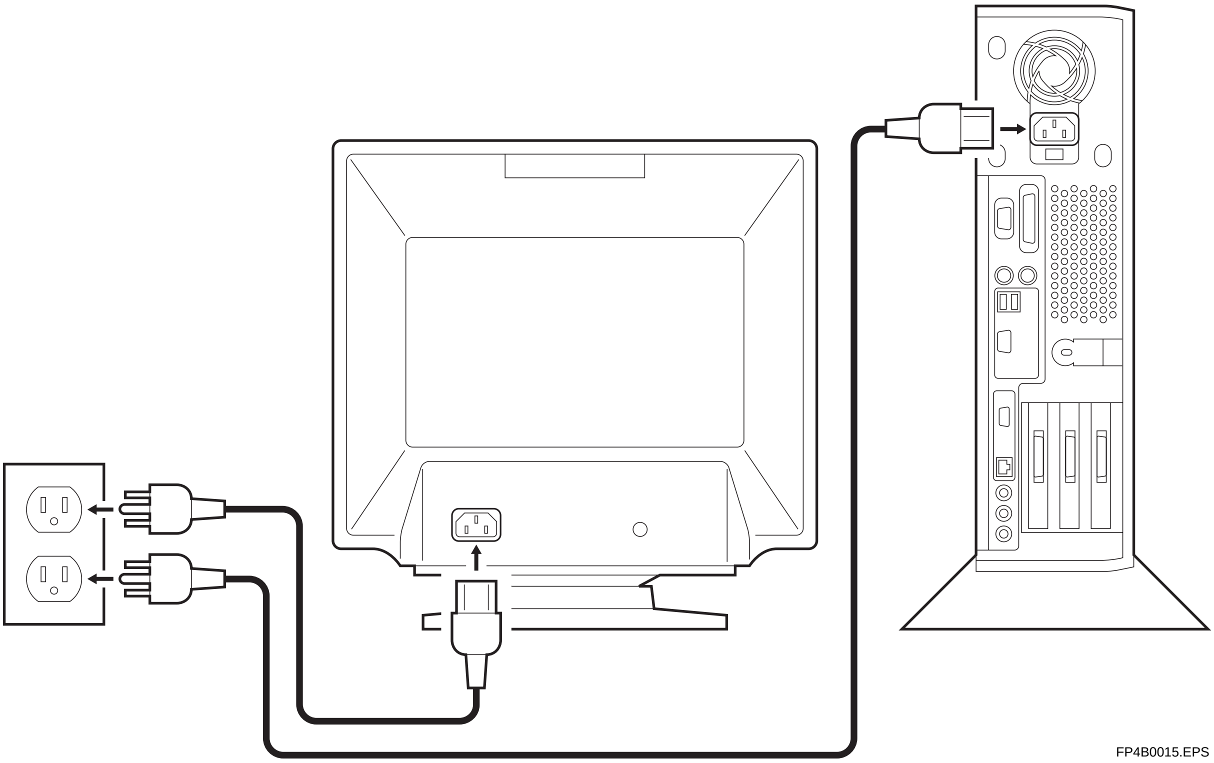
The DELL OptiPlex GX260 series control unit model does not have a voltage selector switch (Automatic detection of voltage).



(5) Connect the power cord to the control unit and the monitor, then to the power outlet.

CAUTION

- Be sure to use the correct power cord for the power supply voltage.
- If the power supply is not 100 to 120 V AC, use the optional power cord.



3. Starting Up

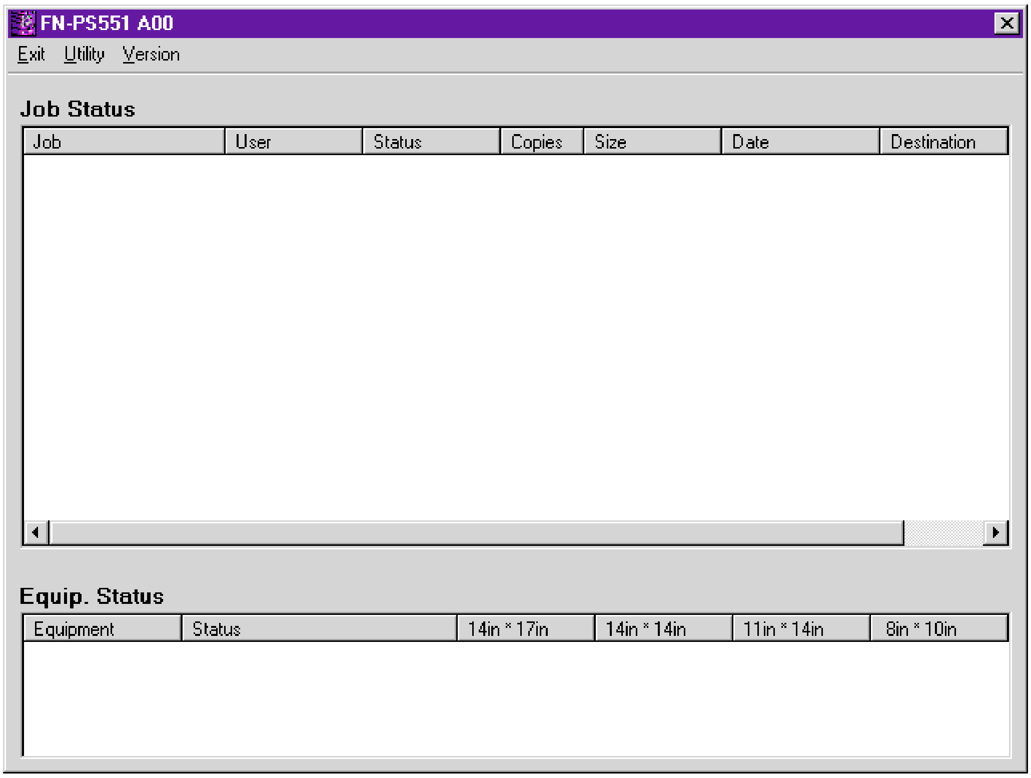
3.1 Turning ON the Unit

(1) Turn on the Power switch of the monitor and then that of the control unit.

→ After the system boots up, the FN-PS551 application starts, and the [FN-PS551] window appears.

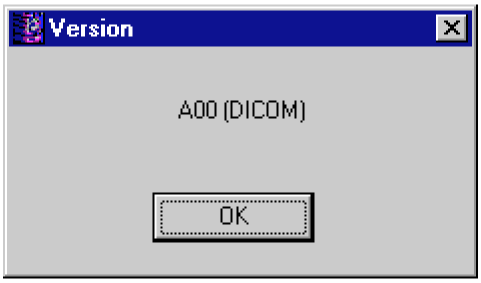
◆ NOTE ◆

The [FN-PS551] window is pre-set at the factory to English-language display. To change the display language, run the system operation check, then follow the instructions given in “8. Setting the Language for FN-PS551 Application”.


FN-PS551 A00
Exit Utility Version
Job Status
Job
User
Status
Copies
Size
Date
Destination
Equip. Status
Equipment
Status
14in * 17in
14in * 14in
11in * 14in
8in * 10in

(2) Click the [Version] menu on the menu bar, and check that the installed key registry (DICOM, TOSHIBA or IPU) is correctly displayed in the [Version] message.

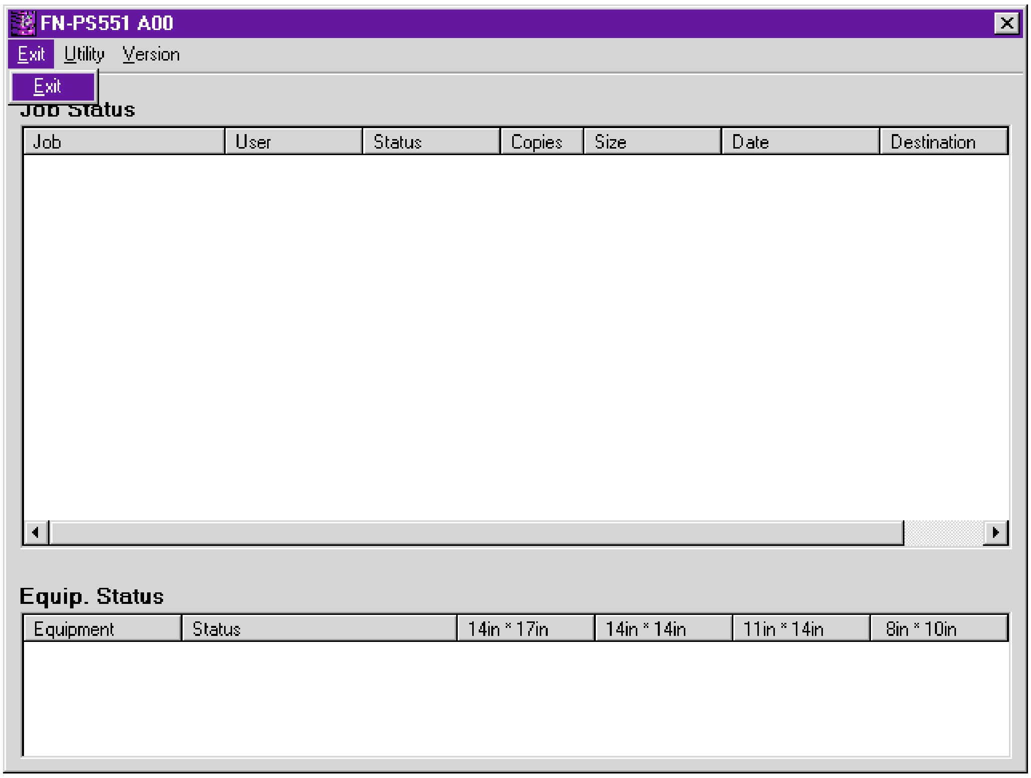
→ The following is displayed when the key registry for the DICOM protocol is installed:



A00 (DICOM)

(3) Click [OK] on the [Version] message.

(4) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.


FN-PS551 A00
Exit
Utility
Version
Exit
Job Status
Job
User
Status
Copies
Size
Date
Destination
Equip. Status
Equipment
Status
14in * 17in
14in * 14in
11in * 14in
8in * 10in

→ The FN-PS551 application is now terminated.

◆ NOTE ◆

If the boots up display of Windows or [FN-PS551] window does not appear within a reasonable time after turning on the power (i.e., after the HDD access light has gone out), or if it is not displayed in appropriate brightness, check that the cable between the monitor and control unit is correctly connected, and the power is on. Adjust the brightness and/or contrast as described in the operating manual provided with the monitor if necessary.

3.2 Installing Optional Software

◆ NOTE ◆

Skip this section if not installing additional specifications.

To add specifications when setting up the system, install the key registry software for the required each specification as described below.

- To add the DICOM protocol specifications
- To add the TOSHIBA protocol specifications
- To add the IPU specifications (supporting software ver. A03 or later)
- To add the PEM (Pattern enhancement processing for mammography) function for IPU specifications (supporting software ver. A04 or later)

CAUTION

- Ensure that the install disk is write-protected (write-disabled).
- PEM (Pattern enhancement processing for mammography) is an added optional function for IPU specifications. The key registry for PEM is not operated when installing independently. Therefore, it is necessary to install with the key registry for IPU when using the Pattern enhancement processing for mammography option.

(1) Insert the floppy disk for the required key registry software (for DICOM, TOSHIBA, IPU or PEM) into the disk drive.

(2) From the [Start] menu on the Windows desktop, click on [Run] .

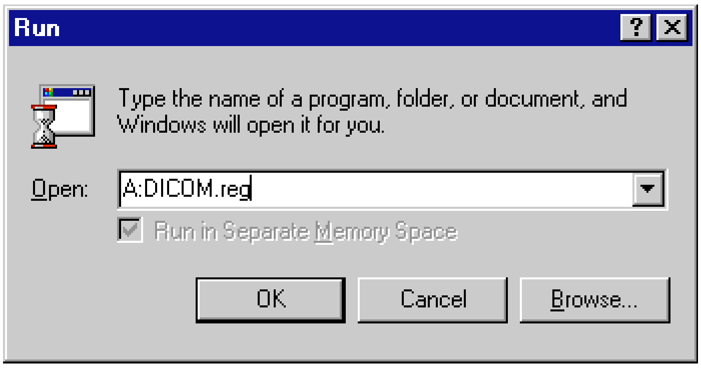
→ The [Run] dialog appears.

◆ REFERENCE ◆

The following screen displays show how to install for Windows NT, however, a similar procedure is taken for Windows XP as well.

(3) Type either "`A:DICOM.reg`", "`A:TOSHIBA.reg`", "`A:IPU.reg`" or "`A:PEM.reg`" (depending on which key registry to be installed), then click [OK] .

→ The following steps show how to install the DICOM key registry software for reference.


Run
?
Type the name of a program, folder, or document, and Windows will open it for you.
Open:
Run in Separate Memory Space
OK
Cancel
Browse...

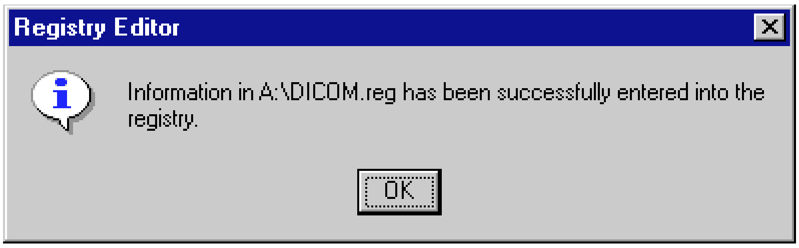
Open: A:DICOM.reg

☑ Run in Separate Memory Space

◆ NOTE ◆

For Windows XP, when [OK] is clicked, a message asking whether to add to the registry is displayed, click [Yes].

→ The [Registry Editor] information appears.


Registry Editor
OK

Information in A:\DICOM.reg has been successfully entered into the registry.

(4) Click [OK] .

(5) To add another specifications, insert the floppy disk for the desired key registry software into the disk drive. Repeat step (1) to (4) shown above.

(6) Remove the key registry software disk from the disk drive.

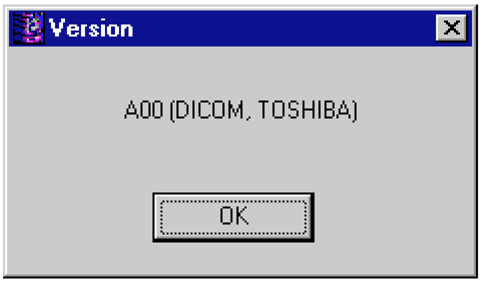
(7) From the [Start] menu on the Windows desktop, click [Program] (or [All Programs]), [Fuji Photo Film], and then [FN-PS551 Appl] to restart the FN-PS551 application.

→ The FN-PS551 application restarts, and the [FN-PS551] window appears.

(8) Click the [Version] menu on the menu bar. Check that the newly installed specification ([DICOM], [TOSHIBA] or [IPU]) is displayed in the [Version] message.

Also, [IPU (PEM)] is displayed if IPU and PEM key registry software has been installed.

→ If the DICOM protocol specifications have been successfully added to existing TOSHOBA specifications, the message should appear as follows.



A00 (DICOM, TOSHIBA)

(9) Click [OK] on the [Version] message.

(10) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

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4. OS Settings

CAUTION

Do not modify other settings during the course of the procedures outlined below. Any attempt to do so could prevent proper system operation. (Changing the screen saver settings, for instance, affects system performance.)

4.1 Setting the Date and Time

The system date/time is used to manage printing order and other features.

(1) Double-click the [My Compute] icon on the Windows desktop.

◆ NOTE ◆

For Windows XP, step (1) is not necessary, execute from step (2) onward.

→ The [My Computer] window appears.

(2) Double-click the [Control Panel] icon on the [My Computer] window.

◆ NOTE ◆

For Windows XP, click [start] on the Windows desktop, then click [Control Panel].

→ The [Control Panel] window appears.

(3) Double-click the [Data/Time] icon on the [Control Panel] window.

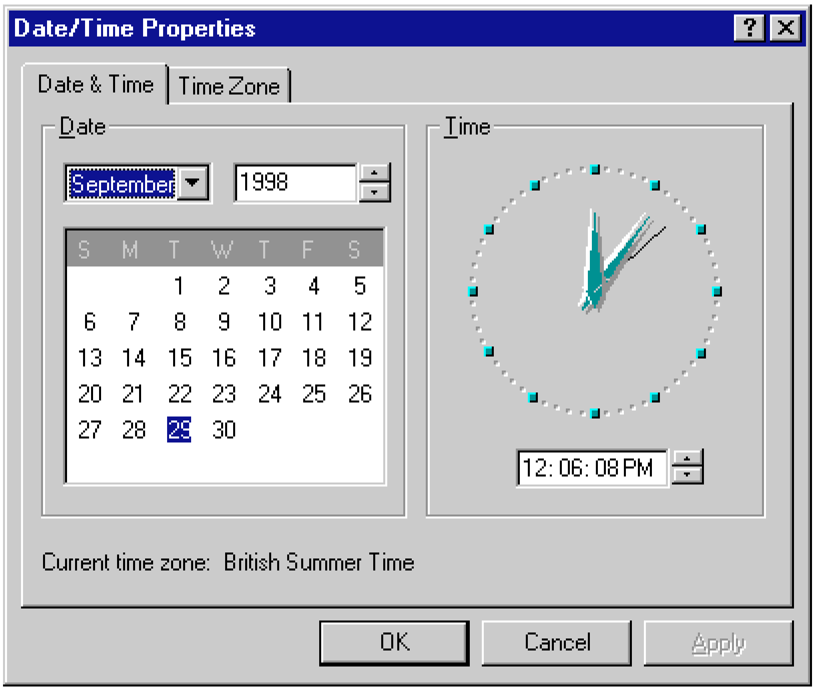
◆ NOTE ◆

For Windows XP, click the [Date, Time, Language, and Regional Options] icon on the [Control Panel] window.
Then, click the [Date and Time] icon on the [Date, Time, Language, and Regional Options] window.

→ The [Date/Time Properties] dialog appears.

◆ REFERENCE ◆

The following screen displays show how to set for Windows NT, however, a similar procedure is taken for Windows XP as well.


Date/Time Properties
?
Date & Time
Time Zone
Date
Time
OK
Cancel
Apply

September 1998

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

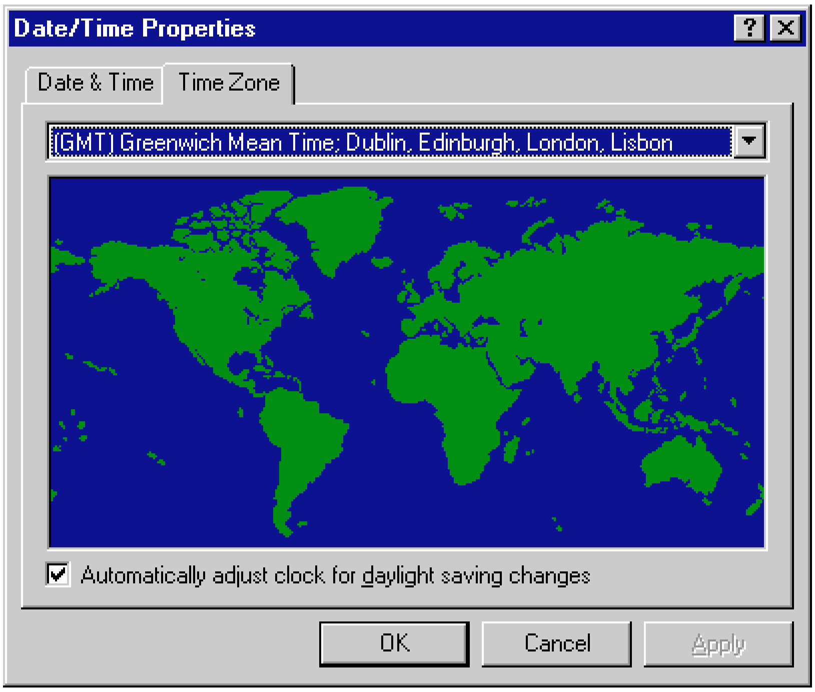
12:06:08 PM

Current time zone: British Summer Time

(4) The [Date & Time] settings window should be displayed. Enter the correct current date and time in the [Date] and [Time] boxes. And then click [Apply].

(5) Click the [Time Zone] tab.

→ The [Time Zone] window appears.


Date/Time Properties
?
Date & Time
Time Zone
OK
Cancel
Apply

(GMT) Greenwich Mean Time; Dublin, Edinburgh, London, Lisbon

☑ Automatically adjust clock for daylight saving changes

(6) Select the appropriate time zone from the drop-down list.

(7) Check that all settings are correctly made, click [Apply] and then [OK] .

(8) Close all windows being displayed on the Windows desktop.

4.2 Setting Network Information for This FN-PS551

Use the appropriate procedure shown below according to the OS type of the control unit to be used (Windows NT/Windows XP) to set network information for use of this FN-PS551 on the network.

■ For Windows NT

(1) Double-click the [My Computer] icon on the Windows desktop.

→ The [My Computer] window appears.

(2) Double-click the [Control Panel] icon on the [My Computer] window.

→ The [Control Panel] window appears.

(3) Double-click the [Network] icon on the [Control Panel] window.

→ The [Network] dialog appears.

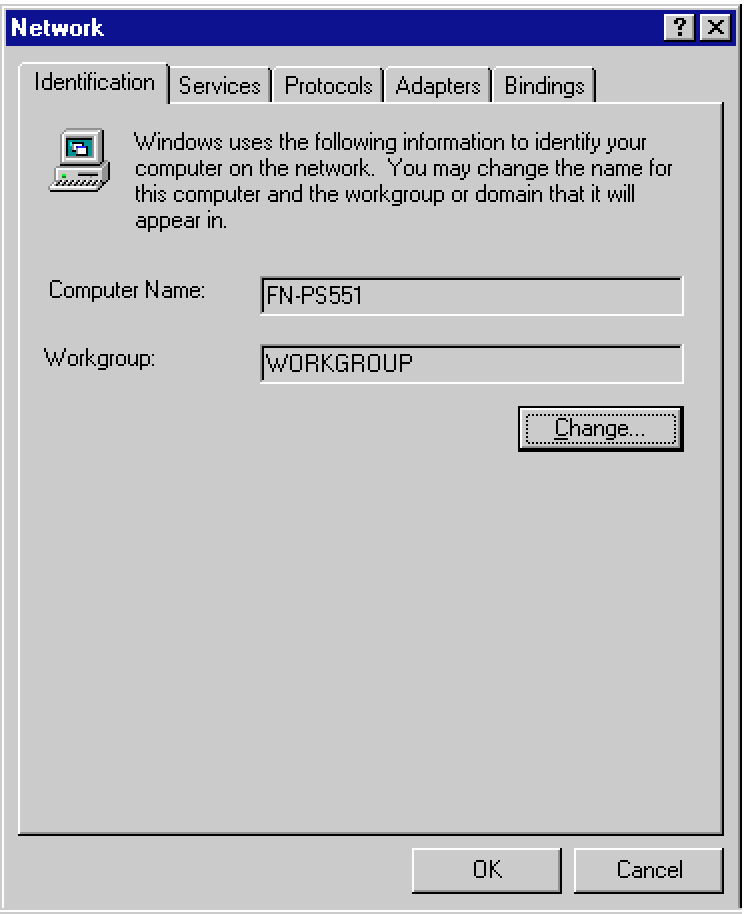
CAUTION

The network settings of this FN-PS551 only apply to [Identification] and [Protocol] tabs on the [Network] dialog. For the other tabs, the default values should be used.

- Host Name Settings

(1) Click the [Identification] tab.

→ The [Computer Name:] and [Workgroup:] fields appear to enter information about identification of the computer (or host) name and workgroup.


Network
Identification
Services
Protocols
Adapters
Bindings
Change...
OK
Cancel

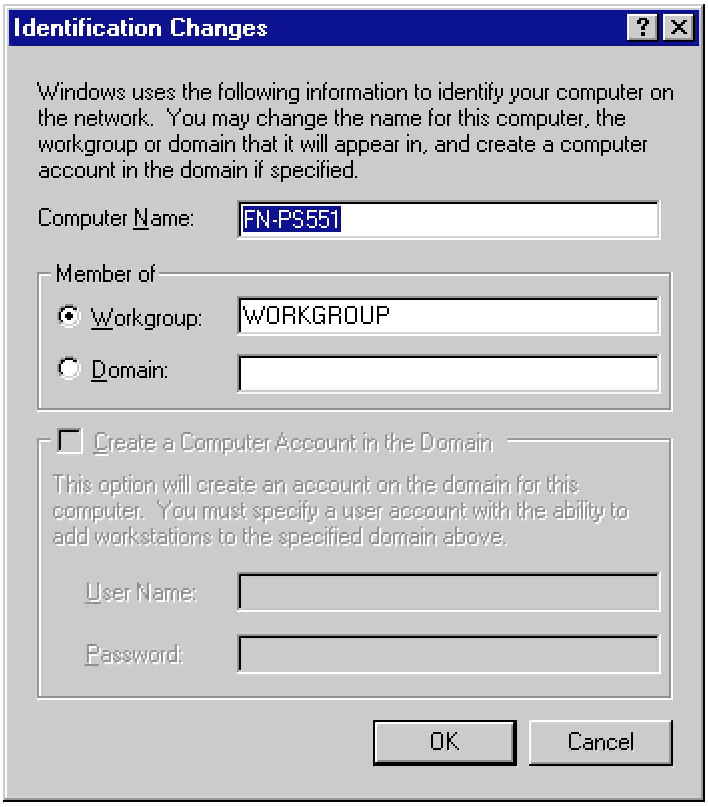
Windows uses the following information to identify your computer on the network. You may change the name for this computer and the workgroup or domain that it will appear in.

Computer Name: FN-PS551

Workgroup: WORKGROUP

(2) Click [Change...] .

→ The [Identification Changes] dialog appears.



Identification Changes

Windows uses the following information to identify your computer on the network. You may change the name for this computer, the workgroup or domain that it will appear in, and create a computer account in the domain if specified.

Computer Name: FN-PS551

Member of

● Workgroup: WORKGROUP

○ Domain:

☐ Create a Computer Account in the Domain

This option will create an account on the domain for this computer. You must specify a user account with the ability to add workstations to the specified domain above.

User Name:

Password:

(3) Enter the host name in the [Computer Name:] box to be distinguished from others on the network, then click [OK] .

→ The [Identification] tab on the [Network] dialog reappears.

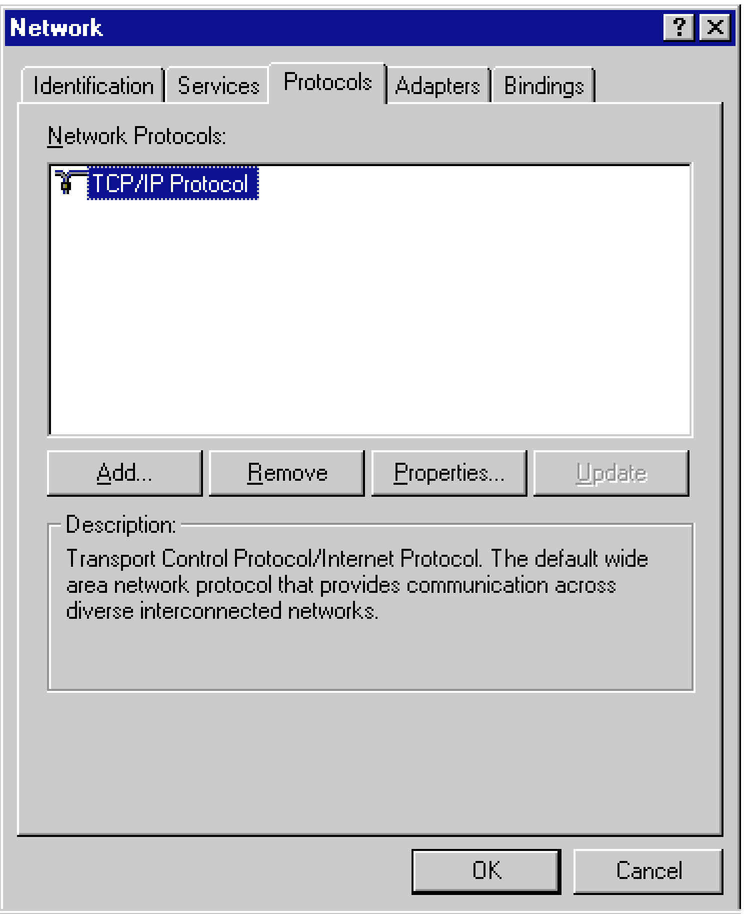
◆ NOTE ◆

- The computer (or host) name can be entered in either lowercase or uppercase. However, it is always displayed in uppercase in either case.
- For the FUJI protocol (FINP) (supporting software ver. A03 or later), the maximum length of computer (or host) name is limited to 10 characters. For other protocols, it is limited to 15 characters.
- The computer (or host) name must be unique within the installation site. If more than one FN-PS551 is used in the same installation site, each unit must be given a different and unique name.
- For the [Workgroup:] and [Domain:] boxes, the default values should be used.

- IP Address/Subnet Mask Settings

(1) Click the [Protocols] tab.

→ The [Network Protocols:] list appears.


Network
Identification
Services
Protocols
Adapters
Bindings
Network Protocols:
TCP/IP Protocol
Add...
Remove
Properties...
Update
Description:
OK
Cancel

Transport Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

(2) Ensure that “TCP/IP Protocol” is highlighted, then click [Properties...] .

→ The [Microsoft TCP/IP Properties] window appears.

CAUTION

Use [IP Address] window in the [Microsoft TCP/IP Properties] dialog to set the IP Address/Subnet Mask. For the other tabs, the default values should be used.

(3) Click the [IP Address] tab.

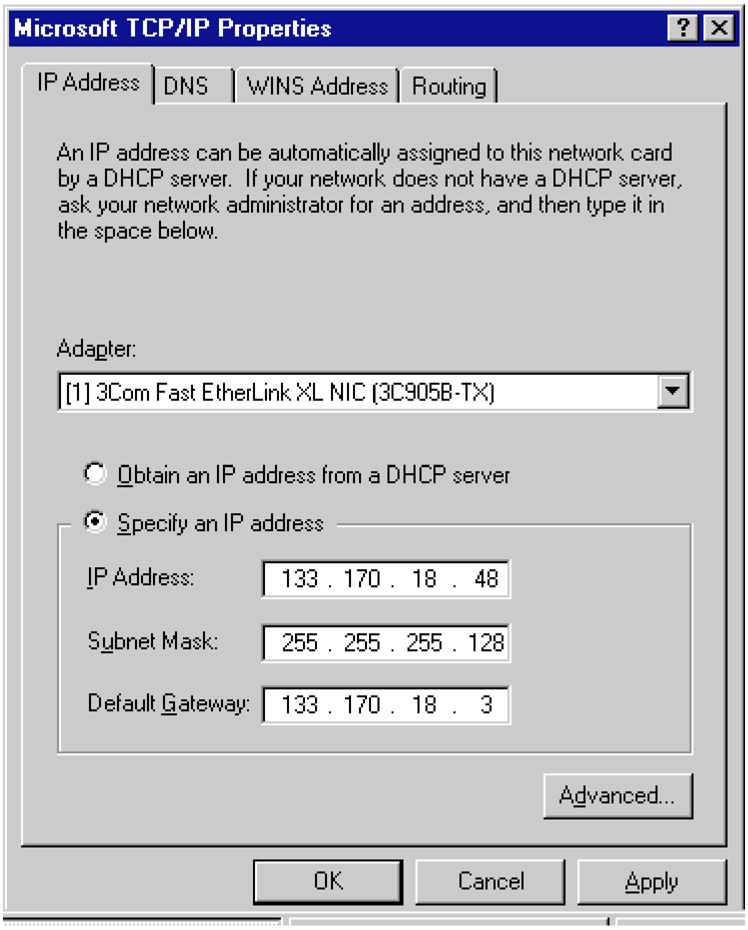
→ Setting items in which IP Address/Subnet Mask information is input are displayed.

(4) Select the [Specify an IP address] option on the [IP Address] window. Enter the following information in the [IP Address:] , [Subnet Mask:] , and [Default Gateway:] boxes. And then click [OK] .

- Enter the IP address of this FN-PS551 in [IP Address:] box.
- Enter the mask data in [Subnet Mask:] box if the network uses a subnet. If the network does not use a subnet, enter the Class C mask data (“255.255.255.0”).
- Enter the IP address for the router (gateway) to which this FN-PS551 is connected in [Default Gateway:]box if image data from clients connecting to different network is received.

◆ NOTE ◆

- Confirm details such as IP address, subnet mask, and router with the network administrator of the installation site.
- The setting process cannot be termined until a subnet mask has been entered.
- [Default gateway:] box need not be entered unless image data is received from different networks.
- The [IP Address] tab display example illustrated below shows the case for a DELL OptiPlex GX1 series control unit model. If the control unit model is different, different [Adapter] name is displayed.



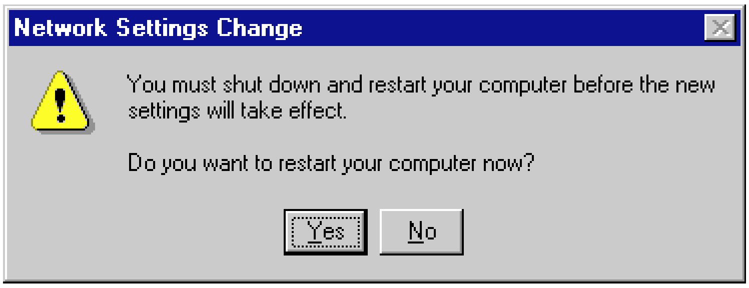
An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.

Adapter:
[1] 3Com Fast EtherLink XL NIC (3C905B-TX)

○ Obtain an IP address from a DHCP server
● Specify an IP address

IP Address: 133 . 170 . 18 . 48
Subnet Mask: 255 . 255 . 255 . 128
Default Gateway: 133 . 170 . 18 . 3

→ The [Network Settings Change] alert appears.



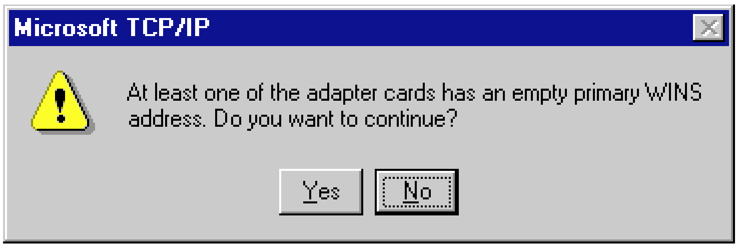
Network Settings Change

You must shut down and restart your computer before the new settings will take effect.

Do you want to restart your computer now?

◆ NOTE ◆

- In step (4), clicking [OK] to the [Microsoft TCP/IP Properties] dialog may display the [Microsoft TCP/IP] alert shown below. In this case, clicking [Yes] will return to the [Microsoft TCP/IP Properties] dialog. Click [Close] of the [Microsoft TCP/IP Properties] dialog to display the [Network Settings Change] alert.



Microsoft TCP/IP

At least one of the adapter cards has an empty primary WINS address. Do you want to continue?

- In step (4), clicking [OK] to the [Microsoft TCP/IP Properties] dialog may display the [Network] dialog with the [Protocols] tab displayed instead of the [Network Settings Change] alert. In this case, click [OK] to close the [Network] dialog, then close the [Control Panel] and [My Computer] windows to finish the setting process.

(5) Click [Yes] .

→ The system reboots and the FN-PS551 application restarts. After that, the [FN-PS551] window appears.

(6) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

→ The FN-PS551 application is now terminated.

■ For Windows XP

● Host Name Settings

(1) Click [start] on the Windows desktop, then right-click [My Computer].

(2) Click [Properties] on the pop-up menu that appears.

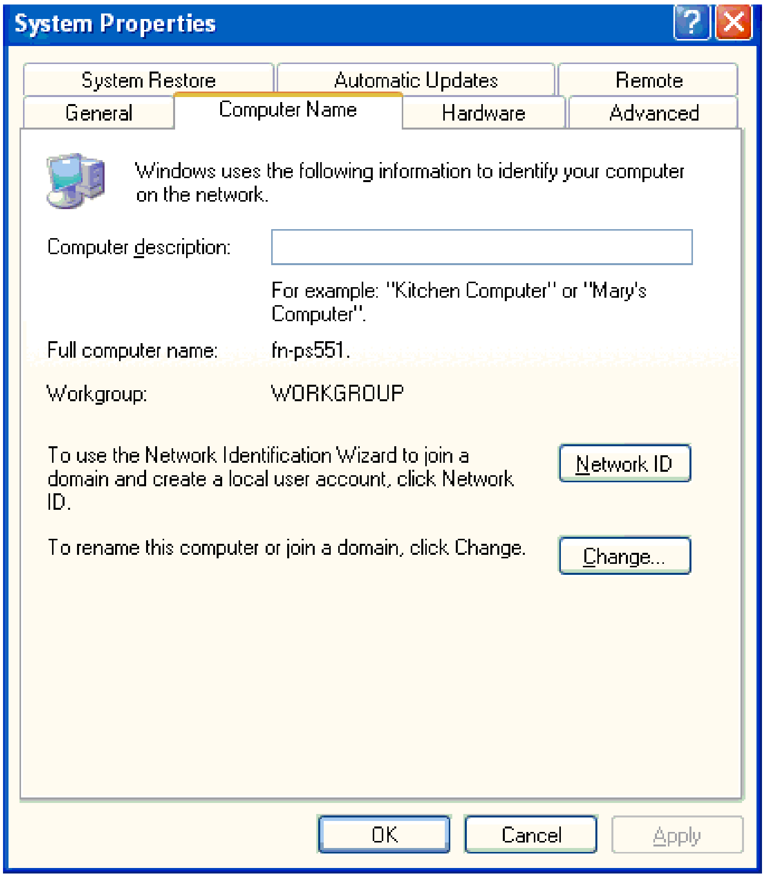
→ The [System Properties] dialog appears.

CAUTION

Display the setting items on the [Computer Name] tab in the [System Properties] dialog to set the host name. For other setting items, the default values should be used.

(3) Click the [Computer Name] tab.

→ Fields appear for entering information identifying the computer (or host) name and workgroup.


System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Network ID
Change...
OK
Cancel
Apply

Windows uses the following information to identify your computer on the network.

Computer description:

For example: "Kitchen Computer" or "Mary's Computer".

Full computer name: fn-ps551.

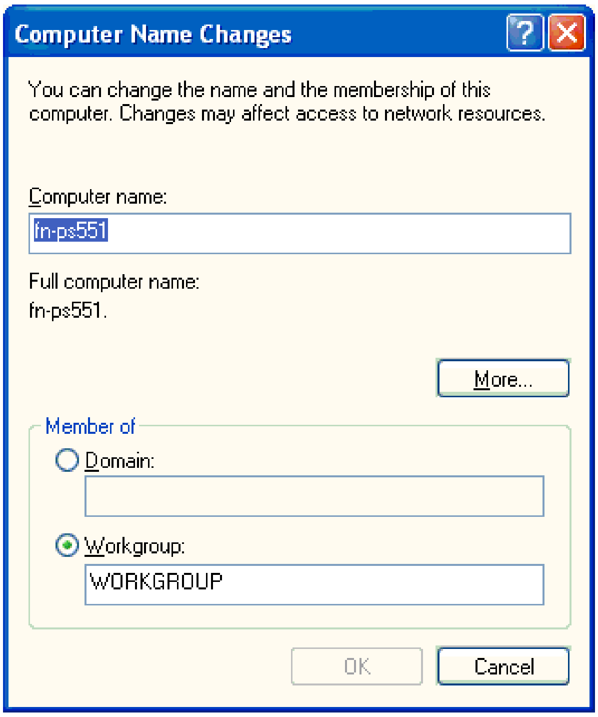
Workgroup: WORKGROUP

To use the Network Identification Wizard to join a domain and create a local user account, click Network ID.

To rename this computer or join a domain, click Change.

(4) Click [Change...].

→ The [Computer Name Changes] dialog appears.



Computer Name Changes

You can change the name and the membership of this computer. Changes may affect access to network resources.

Computer name:
fn-ps551

Full computer name:
fn-ps551.

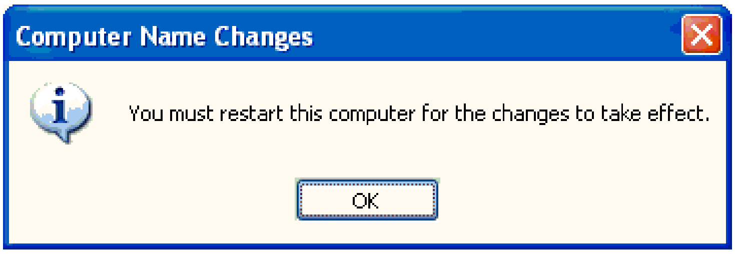
Member of
○ Domain:
● Workgroup:
WORKGROUP

(5) Enter the host name in the [Computer name:] box to be distinguished from others on the network, then click [OK].

◆ NOTE ◆

- Enter the computer (or host) name using single-byte alphanumeric characters. Uppercase and lowercase are displayed as input, however, they are not distinguished for the computer (or host) name.
- For the FUJI protocol (FINP) (supporting software ver. A03 or later), the maximum length of computer (or host) name is limited to 10 characters. For other protocols, it is limited to 15 characters.
- The computer (or host) name must be unique within the installation site. If more than one FN-PS551 is used in the same installation site, each unit must be given a different and unique name.
- For the [Workgroup:] and [Domain:] boxes, the default values should be used.

→ When the computer name is changed, the [Computer Name Changes] information appears.



Computer Name Changes

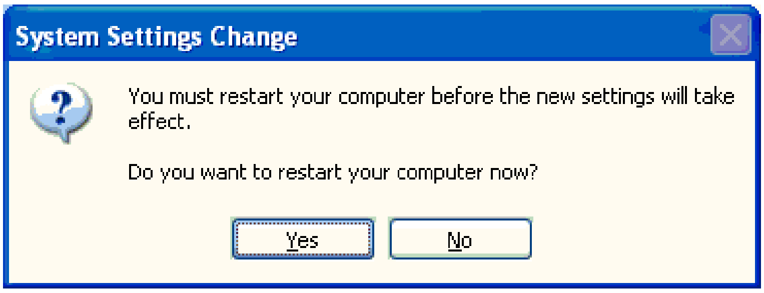
You must restart this computer for the changes to take effect.

(6) Click [OK].

→ Return to the [Computer Name] tab in the [System Properties] dialog.

(7) Click [OK] on the [System Properties] dialog.

→ When the computer name is changed, a [System Settings Change] message appears prompting to choose Yes or No for validation of the system settings.



System Settings Change

You must restart your computer before the new settings will take effect.

Do you want to restart your computer now?

(8) Click [Yes] .

→ The system reboots and the FN-PS551 application restarts. After that, the [FN-PS551] window appears.

(9) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

→ The FN-PS551 application is now terminated.

- IP Address/Subnet Mask Settings

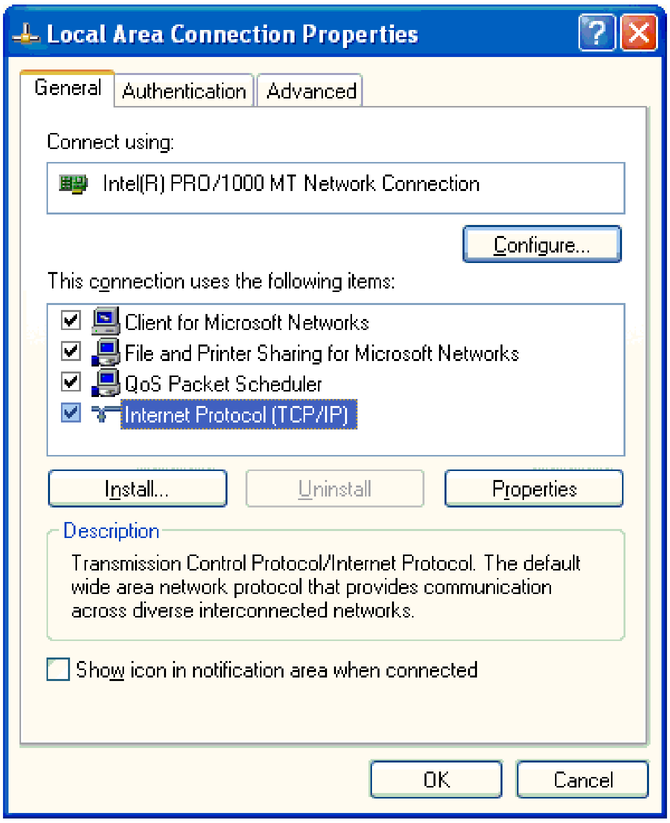
(1) Click [start] on the Windows desktop, then click [Control Panel].
→ The [Control Panel] window appears.

(2) Click the [Network and Internet Connections] icon on the [Control Panel] window.
→ The [Network and Internet Connections] window appears.

(3) Click the [Network Connections] icon on the [Network and Internet Connections] window.
→ The [Network Connections] window appears.

(4) Right-click the [Local Area Connection] icon on the [Network Connections] window.

(5) Click [Properties] on the pop-up menu that appears.
→ The [Local Area Connection Properties] dialog appears.



Connect using:
Intel(R) PRO/1000 MT Network Connection

This connection uses the following items:
☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ QoS Packet Scheduler
☑ Internet Protocol (TCP/IP)

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in notification area when connected

CAUTION

Display the setting items on the [General] tab in the [Local Area Connection Properties] dialog to set the IP Address/Subnet Mask. For other setting items, the default values should be used.

(6) From the list titled [This connection uses the following items:] on the [General] tab, select “Internet Protocol (TCP/IP)”, then click [Properties].

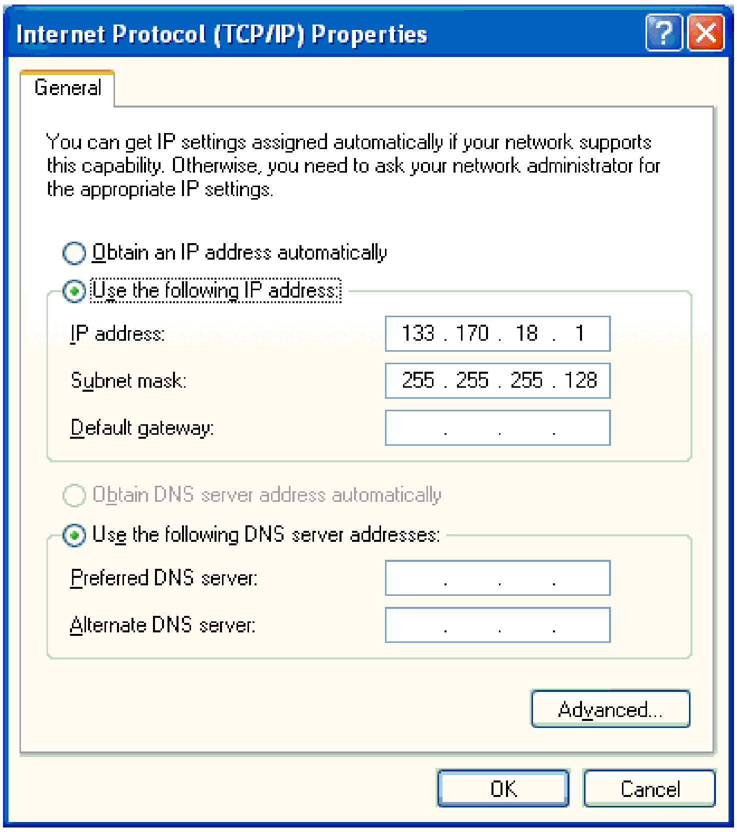
→ Fields appear for entering IP address and subnet mask information.

(7) Select the [Use the following IP address:] option on the [Internet Protocol (TCP/IP) Properties] window. Enter the following information in the [IP address:] , [Subnet mask:] , and [Default gateway:] boxes. And then click [OK] .

- Enter the IP address of this FN-PS551 in [IP address:] box.
- Enter the mask data in [Subnet mask:] box if the network uses a subnet. If the network does not use a subnet, enter the Class C mask data (“255.255.255.0”).
- Enter the IP address for the router (gateway) to which this FN-PS551 is connected in [Default gateway:]box if image data from clients connecting to different network is received.

◆ NOTE ◆

- Confirm details such as IP address, subnet mask, and router with the network administrator of the installation site.
- The setting process cannot be termined until a subnet mask has been entered.
- [Default gateway:] box need not be entered unless image data is received from different networks.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:
IP address: 133 . 170 . 18 . 1
Subnet mask: 255 . 255 . 255 . 128
Default gateway: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

(8) Click [Close] on the [Local Area Connection Properties] dialog.

(9) Close the [Network Connections] window.

5. Configuration Settings

(1) Start up the Service Utility to make configuration settings of the FN-PS551 depending to the configuration of the system which the FN-PS551 is installed.

◆ NOTE ◆

Refer to “7. Service Utility” in the “FN-PS551 Service Manual: MAINTENANCE” for further information about starting up and terminating the Service Utility, and configuration settings.

CAUTION

Never use [Logging] settings on the [SERVICE UTILITY] window at installation and normal service because they are used to analyze the design and configuration. Only if a request is made by the Service Headquarters to use the settings, make use of them according to their instructions.

(2) After completing all setting steps through the Service Utility, click [OK] on the [SERVICE UTILITY] window to terminate the Service Utility.

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6. Checking Operations

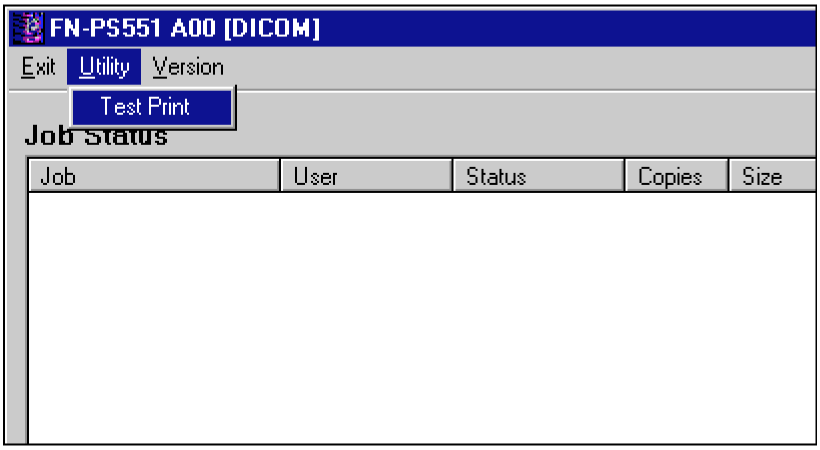
6.1 Checking Output of Images to the Printer

(1) From the [Start] menu on the Windows desktop, click [Program] (or [All Programs]), [Fuji Photo Film], and then [FN-PS551Appl] to restart the FN-PS551 application.

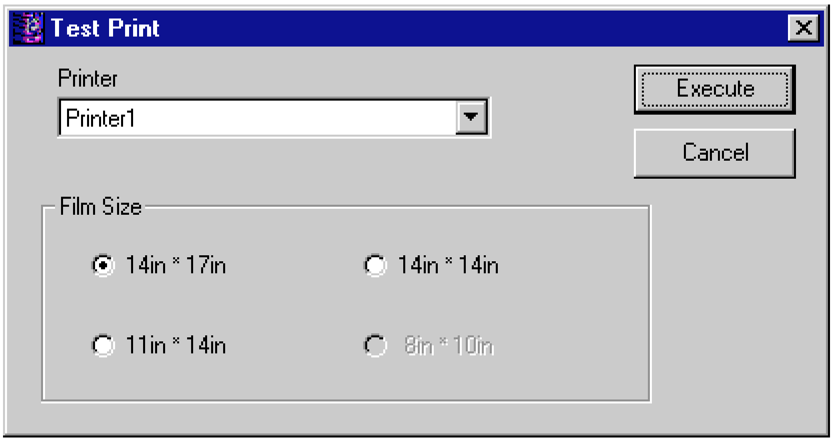
→ The FN-PS551 application restarts, and the [FN-PS551] window appears.

(2) Check that the [Equip. Status] column of the [FN-PS551] window indicates the normal operation of printer.

(3) From the [Utility] menu on the menu bar, click [Test Print].


FN-PS551 A00 [DICOM]
Exit
Utility
Version
Test Print
Job Status
Job
User
Status
Copies
Size

→ The [Test Print] dialog appears.


Test Print
Execute
Cancel
Film Size
14in * 14in
11in * 14in
8in * 10in

Printer: Printer1

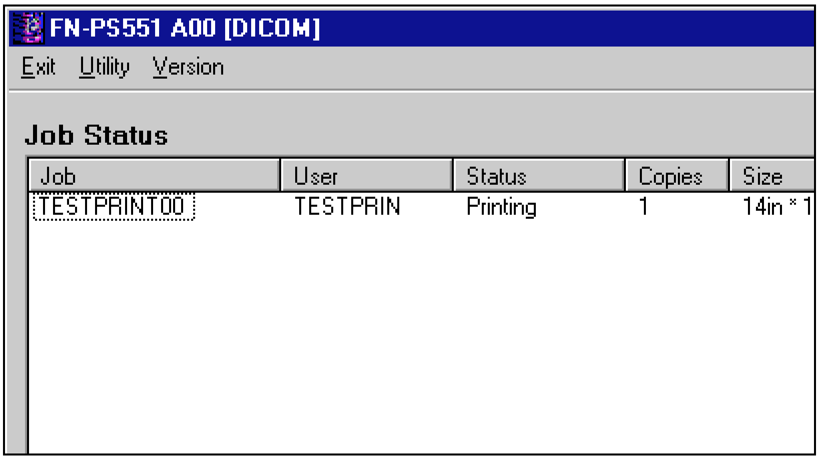
Film Size: ● 14in * 17in

◆ Note ◆

For software ver. A05 or later, [Film Size] “8in ∗ 10in” can be chosen.

(4) Choose the destination printer and film size, then click [Execute] .

→ The [Test Print] dialog disappears. The [Job Status] column of the [FN-PS551] window indicates the progress of the test image during processing and printing one after another.



Job	User	Status	Copies	Size
TESTPRINT00	TESTPRIN	Printing	1	14in * 1

(5) The test image should then be output to the designated printer. Check for printing problems.

6.2 Checking Communication with the Client

This test checks network transmission with all connected clients.

(1) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

→ The FN-PS551 application is now terminated.

(2) From the [Start] menu on the Windows desktop, click [Program] and then [Command Prompt] .

◆ NOTE ◆

For Windows XP, click [start] on the Windows desktop, then click [All Programs], [Accessories] and [Command Prompt] in this order.

→ The [Command Prompt] window appears.

(3) Type "`ping xxx.xxx.xxx.xxx`" and press the <Enter> key.

◆ NOTE ◆

- The command "ping" is used to test the status of network connections with clients by investigating whether each IP system on the network is working properly.
- "`xxx.xxx.xxx.xxx`" is the IP address of the client to be tested.

→ If the connection is working properly, the message "Reply from xxx.xxx.xxx.xxx:..." is displayed four times.

◆ NOTE ◆

The message "Request timed out" indicates a transmission failure. Check the condition of Ethernet cable connections and the IP address of the destination client.

(4) Type "`exit`" and press the <Enter> key to exit from the [Command Prompt].

→ The [Command Prompt] window disappears.

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6.3 Checking Client Connections

Arrange each connected client to make a print request, and check the printed output for errors and image problems. Also adjust the image quality.

- Test Print from client

(1) From the [Start] menu on the Windows desktop, click [Program] (or [All Programs]), [Fuji Photo Film], and then [FN-PS551Appl] to restart the FN-PS551 application.

(2) Confirm that the status of the printer shown in the [Equip. Status] list in the [FN-PS551] window is “Operating”, and then perform a print output from client.

(3) Check that the designated image is printed out in the correct format with no error nor image problems.

● Image Quality Adjustment

(1) In consultation with the user, determine the final image quality conditions of print film.

(2) To change the image quality, exit from the FN-PS551 application to start up the Service Utility.

Open the [Network Client Property] dialog for each client from the [Client] tab on the [SERVICE UTILITY] window. Change the relevant settings on the [magnify] (for enlargement/reduction condition) and [LUT] (for tone correction condition) tabs of the [Network Clients Property] dialog.

Then, restart the FN-PS551 application to print out the image from a client at the new settings, and check the printed output for image quality.

◆ NOTE ◆

- The FN-PS551 processes in accordance to the parameters when image quality parameters accompany image data transmitted from the DICOM and TOSHIBA protocol clients. Therefore, image quality adjustments using the FN-PS551 Service Utility are not performed. If using the FN-PS551 to adjust image quality, it is necessary to set the client to not send the image quality parameters.
- If the IPU function (supporting software ver. A03 or later) is used, the condition of image quality (each image processing) is changed at the side of a client because image data is processed with image processing parameters accompanied by the data from the client.
  However, if any image processing condition (Dynamic range control processing, Tomographic artifact suppression processing, Multi-objective frequency processing or Pattern enhancement processing for mammography (supporting software ver. A04 or later as an option)) needs to be added at the FN-PS551, start up the Parameter Updating Editor from the [Utility] menu in the [FN-PS551] window. And then change appropriate parameter settings.
  However, for software ver. A04 or later, Parameter Updating Editor can not be used in some cases (parameter setting is not necessary) depending on the FINP property setting of FN-PS551 Service Utility. Even if it is usable, settable image processing parameters vary depending on the Service Utility settings.
  Refer to the “FN-PS551 Operation Manual” for further information about the Parameter Updating Editor including how to use it.

7. Saving Settings

Once the operation tests is complete, save all settings information onto floppy disk. After this, switch off the power to the control unit.

● Saving settings

◆ NOTE ◆

A DOS-formatted floppy disk to save setting files will be required.

(1) Insert a floppy disk into the disk drive to save setting files by means of the save function of Service Utility.

◆ NOTE ◆

Refer to “7. Service Utility” and “7.10 Saving and Restoring Settings Files” in the “FN-PS551 Service Manual: MAINTENANCE” for further information about starting up and terminating the Service Utility, and saving setting files.

(2) Remove the floppy disk saved setting files.

◆ NOTE ◆

Store the floppy disk containing the setting files in a safe place. It may be needed in order to restore unique system settings in case of a system breakdown or following upgrading of the software.

(3) Exit the Service Utility by clicking [OK] on the [SERVICE UTILITY] window.
→ The Service Utility is now terminated.

◆ NOTE ◆

To change the representative language for the FN-PS551 application to other than English (United States), execute the procedure in “8. Setting the Language for FN-PS551 Application” instead of the following “● Switch off the power to the control unit (for Windows NT or Windows XP)” procedure.
If the representative language is not to be changed, execute the following “● Switch off the power to the control unit (for Windows NT or Windows XP)” procedure.

- Switch off the power to the control unit (For Windows NT)

  (1) Click [Start] on the Windows desktop, then click [Shut Down...] .
  → The [Shut Down Windows] dialog appears.

  (2) Select [Shut down the computer?], and then click [Yes] .
  → The [Shut Down Windows] message appears.

  ◆ NOTE ◆

  Choosing [Restart the computer?] or clicking the [Restart] on the [Shut Down Windows] message at step (2) will shut down and restart the computer, and start up the FN-PS551 application automatically. In this case, exit from the FN-PS551 application once,and then repeat steps (1) and (2).

  (3) Switch off the power to the control unit and monitor.

- Switch off the power to the control unit (For Windows XP)

  (1) Click [start] on the Windows desktop, then click [Turn off computer].
  → The [Turn off computer] window appears.

  (2) Click [Turn off].
  → The power to the control unit is switched off.

  ◆ NOTE ◆

  Clicking [Restart] on the [Turn off computer] window at step (2) will shut down and restart the computer, and start up the FN-PS551 application automatically. In this case, exit from the FN-PS551 application, and then repeat steps (1) and (2).

  (3) Switch off the power to the monitor.

8. Setting the Language for FN-PS551 Application

To change the representative language for the FN-PS551 application to one other than English (United States) that is a factory default, follow the procedure shown below.

◆ NOTE ◆

- If the representative language is not changed, the procedure described in this section is omitted.
- Select from the eight languages listed below. Other languages are not supported.
  English (United States), French (Standard or France), German (Standard or Germany), Italian (Standard or Italy), Norwegian (Bokmal), Swedish, Spanish (Modern Sort or Spain), Danish.

(1) Set the representative language for the FN-PS551 Application according to the OS type of the control unit to be used (Windows NT / Windows XP) referring to the appropriate procedure shown below.

- For Windows NT
  “8.9 Setting the Language for FN-PS551 Application” in “MAINTENANCE”
- For Windows XP
  “11.6 Setting the Language for FN-PS551 Application” in “MAINTENANCE”

(2) After completing setting of the representative language for the FN-PS551 Application, switch off the power to the control unit, referring to the appropriate procedure shown below.

- For Windows NT
  “● Switch off the power to the control unit (for Windows NT)” in “INSTALLATION 7. Saving Settings”
- For Windows XP
  “● Switch off the power to the control unit (for Windows XP)” in “INSTALLATION 7. Saving Settings”

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9. Final Installation of FN-PS551

Install the equipment in the final installation site.
The monitor, keyboard, and mouse can be removed under the following conditions. Determine whether each of them should be used or not in consultation with the user at the installation site.

● Operations with or without the aid of the Monitor, Keyboard, and Mouse

- The system runs normally without the monitor, keyboard or mouse. Consult with the user to determine whether these components are necessary or not with reference to the table below. If determined to be unnecessary, these components may be removed.
- Even if the monitor is removed according to the user's judgement, the system will not be affected by the removal. However, it is not possible to determine the operating status of the system. It is also impossible to determine any failure even if it occurs in the control unit or the OS.
- The monitor and keyboard are required to perform service operations such as installation and maintenance of the system.
- User and service operations do not necessarily require the mouse. However, they can be performed more efficiently with the use of the mouse.

	Viewing the Operational Status	**Deleting the Print Job**
Monitor and keyboard connected	Enabled	Enabled
Only monitor connected	Enabled	Disabled
Neither connected	Disabled	Disabled

TP4B0024.EPS

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Appendix 1. Installing the Expanded Memory for the Control Unit

For DELL OptiPlex GX110/GX150 series control unit (PC) models, the expanded memory installation procedure is as shown below.
The setting changes the virtual memory volume after installation of the expanded memory.

A1.1 Installing the Expanded Memory

WARNING

To prevent electric shock and/or damage to the control unit, always switch off the power to the control unit and remove the power cord before attempting installation or removal of parts.
Power is continually flowing through the unit while the power cord is connected to the socket.

CAUTION

Before beginning, touch the metal plate at the rear of the control unit to discharge static electricity from the body.
In addition be sure to wear a wristband for grounding when performing install of boards.
Otherwise static electricity in the body may cause damage to electronic parts on the boards and the control unit.

◆ NOTE ◆

Memory expansion applies only to DELL OptiPlex GX110/GX150 series control unit models. Add 128MB memory to the standard 128MB memory at shipment after manufacturing to expanded memory to a total of 256MB.

● Removing the Control Main Unit Cover

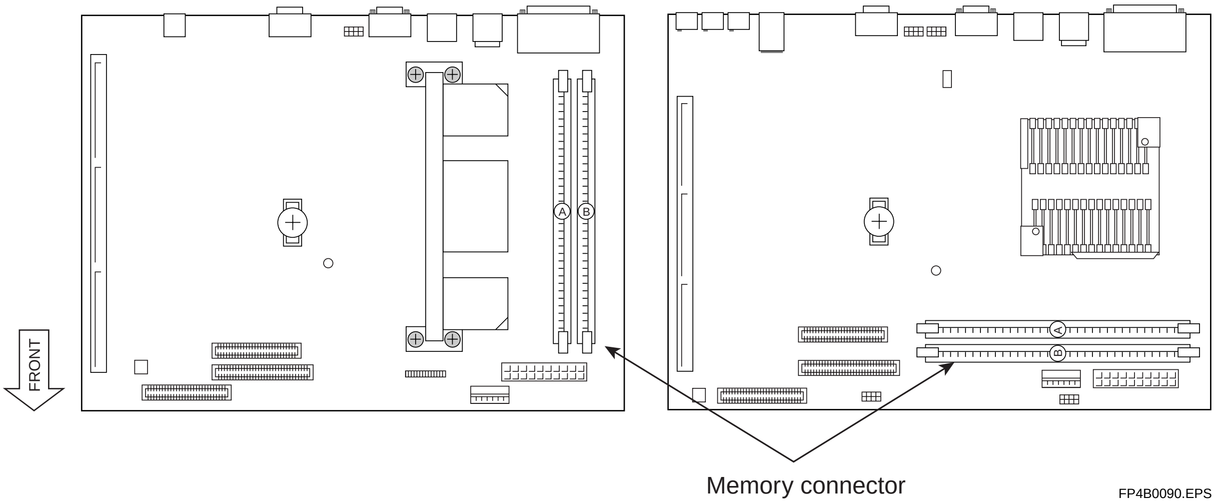
Remove the Control Main Unit Cover.

◆ REFERENCE ◆

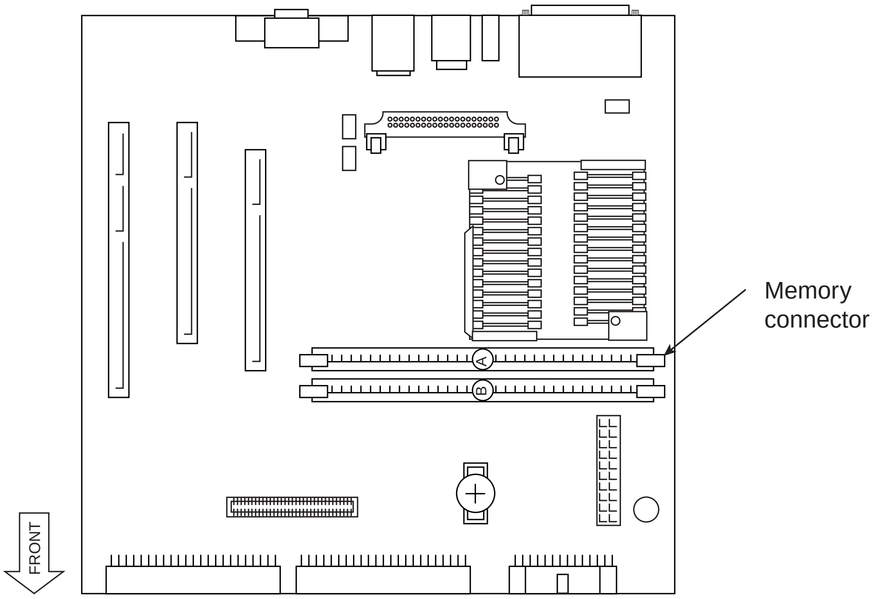
Refer to “● Remove the Control Main Unit Cover” procedure, either “■ For GX1/GX110 Series Control Unit” or “■ For GX150/GX260 Series Control Unit” in “INSTALLATION 2.5 Installing the Printer Interface Board” according to the control unit (PC) model to be used.

● The Memory Connector Position for the System Board

- For a DELL Optiplex GX110 series control unit
  (There are 2 types as shown below according to the time of shipment.)


FRONT
A
B
A
B
Memory connector
FP4B0090.EPS

- For a DELL Optiplex GX150 series control unit

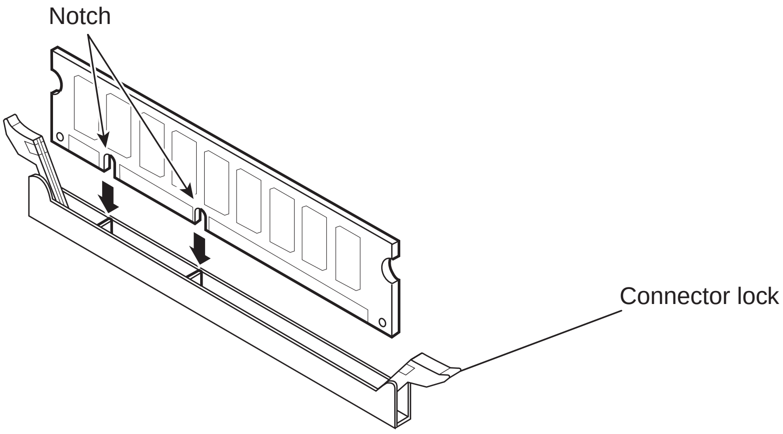

FRONT
A
B
Memory
connector
FP4B0091.EPS

● Installing the Expanded Memory

Install the expansion memory (128 MB) in an unused memory connector (DIMM-B).

◆ NOTE ◆

- Install expanded memory checking the notch direction.
- Check that expanded memory is inserted properly in the memory connector and fixed with the connector lock.



FP4B0092.EPS

● Attaching the Control Main Unit Cover

Attach the Control Main Unit Cover.

◆ REFERENCE ◆

Refer to “● Re-attach the Control Main Unit Cover” procedure, either “■ For GX1/GX110 Series Control Unit” or “■ For GX150/GX260 Series Control Unit” in “INSTALLATION 2.5 Installing the Printer Interface Board” according to the control unit (PC) model to be used.

A1.2 Changing the Vertual Memory Volume

When memory is expanded after shipment, the virtual memory capacity used by the system is still set at the value based on 128MB before expansion of memory. Follow the procedure shown below to change the virtual memory capacity corresponding to 256MB after expansion.

(1) Click [Start] on the Windows desktop, then click [Settings] and [Control Panel] in this order.

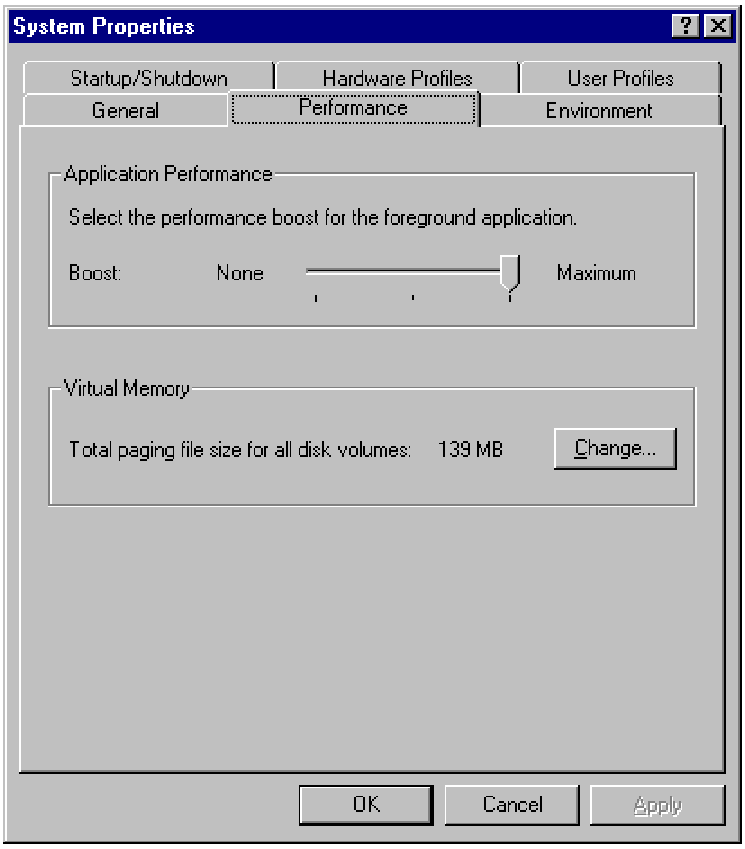
→ The [Control Panel] window appears.

(2) Double-click the [System] icon.

→ The [System Properties] dialog appears.

(3) Click the [Performance] tab.

→ Setting items on the [Performance] tab are displayed.



System Properties

Application Performance

Select the performance boost for the foreground application.

Boost: None Maximum

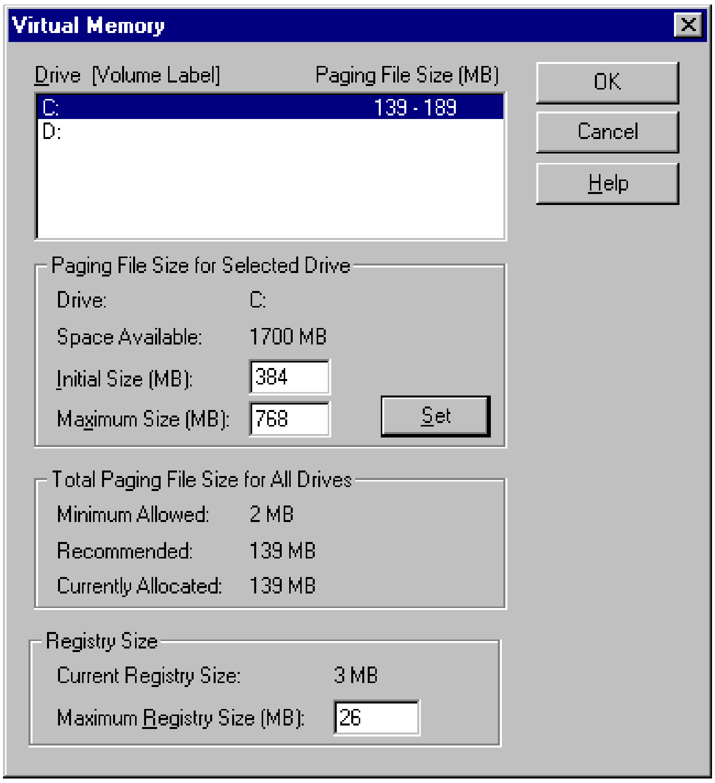
Virtual Memory

Total paging file size for all disk volumes: 139 MB

(4) Click [Change...] under [Virtual Memory].

→ The [Virtual Memory] dialog appears.

(5) Under [Paging File Size for Selected Drive] change [Initial Size (MB):] box value to “384” and [Maximum Size (MB):] box value to “768”.



Drive [Volume Label]	Paging File Size (MB)
C:	139 - 189
D:	

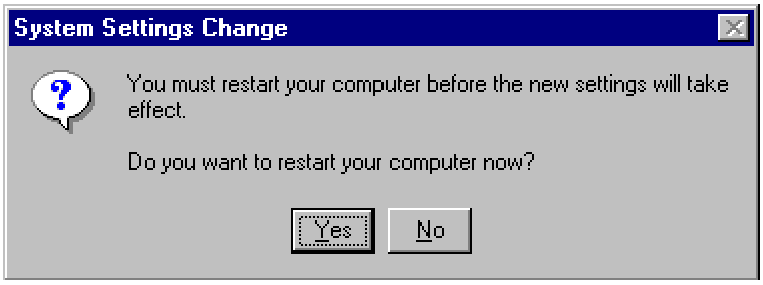
Paging File Size for Selected Drive
Drive: C:
Space Available: 1700 MB
Initial Size (MB): 384
Maximum Size (MB): 768

Total Paging File Size for All Drives
Minimum Allowed: 2 MB
Recommended: 139 MB
Currently Allocated: 139 MB

Registry Size
Current Registry Size: 3 MB
Maximum Registry Size (MB): 26

(6) Click [Set], and then [OK] to fix.
→ Setting items on the [Performance] tab reappears.

(7) Click [Close] on the [System Properties] dialog.
→ A [System Settings Change] message appears.



You must restart your computer before the new settings will take effect.

Do you want to restart your computer now?

(8) Click [Yes].
→ The system reboots and the FN-PS551 application starts up automatically.

(9) Exit from the FN-PS551 application by clicking [Exit] on the [Exit] menu in the [FN-PS551] window or clicking the close box ☒ in the top right-hand corner of the window.

(10) Close the [Control Panel] window.

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Fuji Network Print Server FN-PS551
Service Manual

APPENDIX

Control Sheet

Issue Date	Revision	Reason	Pages Affected
10/30/98	00	New Release (FM2337)	All pages
05/12/99	01	Revision (IPU function added) (FM2442)	34~37
03/30/2000	02	Revision (Software ver. A04/other revisions) (FM2730)	22~33
12/18/2001	03	Revision (Software ver. A05/other revisions) (FM3271)	30, 33

Fuji Network Print Server FN-PS551

Service Manual Appendix

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Chapter 1 **Network Installation Specification** 4

Chapter 2 **Service Utility-Additional Instructions** 18

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Chapter 1 Network Installation Specification

This document represents the HI-C654/OD-F614 Network Installation Specifications (the 6th Edition Dec.20,1996). These specifications are intended for Japan; some items may not apply in other countries.

1. Introduction

This Specification sets forth the specifications and requirements associated with installation work conducted in accordance with the HI-C654/OD-F614 Network Specification.

2. Specifications

The HI-C654/OD-F614 must be connected via a transceiver cable, with a transceiver attached to a coaxial cable (yellow cable) in accordance with the IEEE802.3 standard.
Table 1 lists recommended cable and device types.
If necessary, the HI-C654/OD-F614 can also be connected to a HUB or MAU using twisted pair cable.
Table 2 lists recommended device types.
Other cables and devices not listed in the table should not be used, as a rule.

3. Requirements

System implementation imposes the following requirements. These requirements should also be notified to an outside vendor who will engage in installation work.

(1) The network should be installed so that coaxial cables, transceivers, and transceiver cables are easily accessible during network troubleshooting.

(2) The maximum segment length of a single coaxial cable is 500 m. To extend it further, a local repeater should be used.

(3) If any two HI-C654/OD-F614 nodes are to be provided, the segment length between them should be equal to shorter than 1.5 km, and the number of repeaters therebetween should be equal to or less than 2. (See Fig. 2, Example of Local Repeater Connection.)

(4) It should be always confirmed that the local repeater is powered on when it is used (up and running around the clock, or powered on when used). In addition, sufficient installation space should be secured during installation of the repeater to facilitate its operation.

(5) The distance between transceivers should be 2.5 m or greater. Since the recommended coaxial cable is marked at intervals of 2.5 m, a transceiver should be connected so that its cable conductor is aligned to the mark.

(6) Sufficient installation space should be secured for a transceiver to permit its replacement in cases where it fails.

(7) It should be always confirmed that an 8-port transceiver is powered on when it is used (up and running around the clock, or powered on when used). In addition, sufficient installation space should be secured during installation of the transceiver to facilitate its operation.

(8) If a 4-port or 8-port transceiver(s) is used, the number of transceiver(s) connected adds up to leakage current. Thus, a leakage breaker with a capacity greater than that of the transceiver(s) connected should be provided.

(9) The maximum segment length of a transceiver cable is 50 m.

(10) If a transceiver or repeater has a SQE (signal quality error) test switch (heartbeat switch), it should be always ON.

(11) For a network conforming to the operation room specification, only single-port transceiver(s) should be used.

(12) If a network extends from one building to another, remote repeaters should be used, which should be connected via fiber optic cable. (See Fig. 3, Example of Remote Repeater Connection.)

Note, however, that if the buildings share common ground (earth), local repeaters should be used.

When remote repeaters are to be used, the following points should be noted.

(13) Only a single-port transceiver should be used for connection to the remote repeater.

(14) The SQE switch of the transceiver for connection to the repeater should be turned OFF.

(15) It should be always confirmed that a remote repeater is powered on when it is used (up and running around the clock, or powered on when used). In addition, sufficient installation space should be secured during installation of the remote repeater to facilitate its operation.

(16) For fiber optic cable hookup, service of an outside expert should be sought.

Precautions for using a 10BaseT system with HUB/MAU

(1) The HI-C654 has no 10BaseT connector. Use the MAU instead.

(2) The SQE switch on the MAU should be set to ON.

(3) Due to its shape, the HI-C654 does not accept large MAU devices. Use only a recommended MAU device.

(4) All devices, including the HI-C654 and the OD-F614, should be connected using HUBs and twisted pair cable (see Fig. 4, Hub Connection Setup No. 1).

(5) The SQE switch on the transceiver used to connect to the HUB should be turned OFF.

(6) It should be always confirmed that the HUB is powered on when it is used (Up and running around the clock, or powered on when used). In addition, sufficient installation space should be secured during installation of the HUB to facilitate its operation.

(7) No more than four HUBs should be used to connect any two stations (see Fig. 5, Hub Connection Setup No. 2).

(8) The maximum length of twisted pair cable is 100 m.

(9) 10BaseT twisted pair cable is more susceptible to noise than 10Base5 cable. Avoid locations where high-voltage cables are present.

An example of network implementation is shown in Fig. 1 to Fig. 4. A portion surrounded by dotted line represents a scope of work.

4. Acceptance After Work

The receiving inspection after installation includes the following tests. The equipment is not accepted unless the tests return acceptable results. Test (2) is taken from Showa Electric Wire & Cable Co., while tests (2) and (3) are taken from Allied Telesys. Perform Test (1) when necessary.

(1) TDR (Time-Domain Reflector) Test

<Description>

A coaxial cable will be checked for any break or twist.

(2) Transceiver Continuity Test

<Description>

Continuity will be checked between a tap portion of a transceiver and a coaxial cable.

(3) Communication Test Between Terminals or Between Coaxial Cables

<Description>

Bidirectional tests will be conducted between terminals or between coaxial cables to check whether communication is possible therebetween.

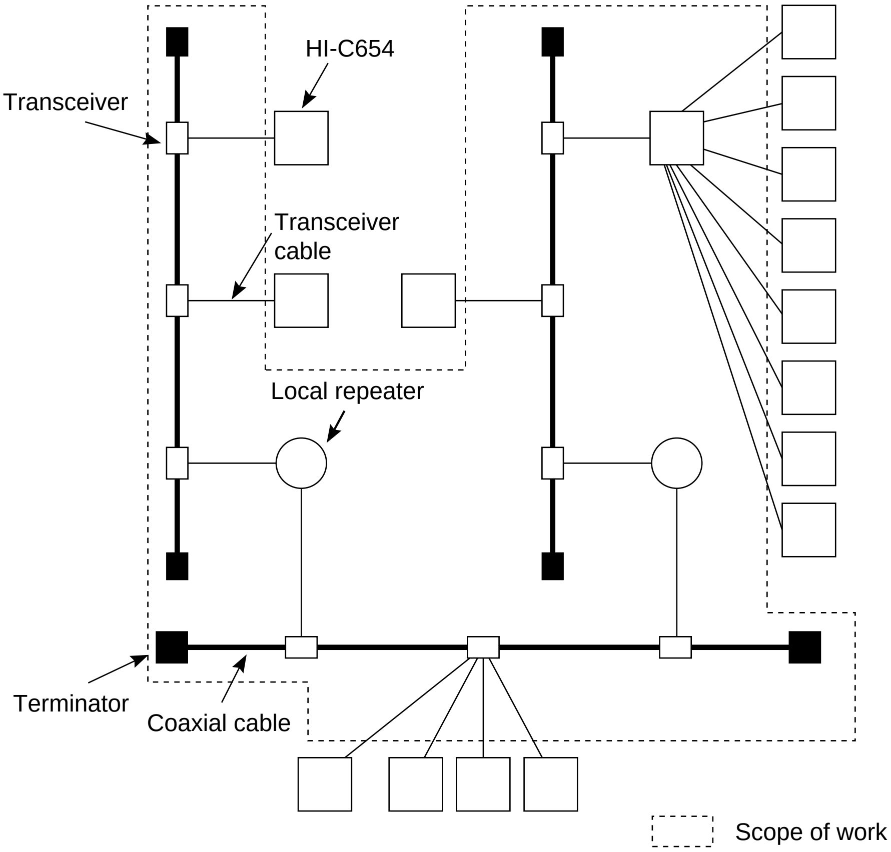
HI-C654
Transceiver
Transceiver cable
Local repeater
Terminator
Coaxial cable
Scope of work

Fig. 1 Example of Network Implementation

Table 1 Recommended Items

Item Name	Allied Telsis	Showa Electric Wire & Cable
Coaxial cable	Yellow Ethernet cable: 10 m to 500 m	ECX-8672
1-port transceiver	Centre COM 106	ETR 7028T or ETR6071A
4-port transceiver	Centre COM 446	EMT 7019
8-port transceiver	Centre COM 810	EMT 7030A
Local repeater	Centre COM MR123	EMR 304A
Transceiver cable	Transceiver cable: 20 m to 50 m Transceiver cable, slim: 1 m to 15 m	AUI-50-5M to 50M AUI-15-1M to 15M
Remote repeater	Centre COM MR126F	EMR304A + EOT3027 (for FC connector) or ETR506A (for ST connector)

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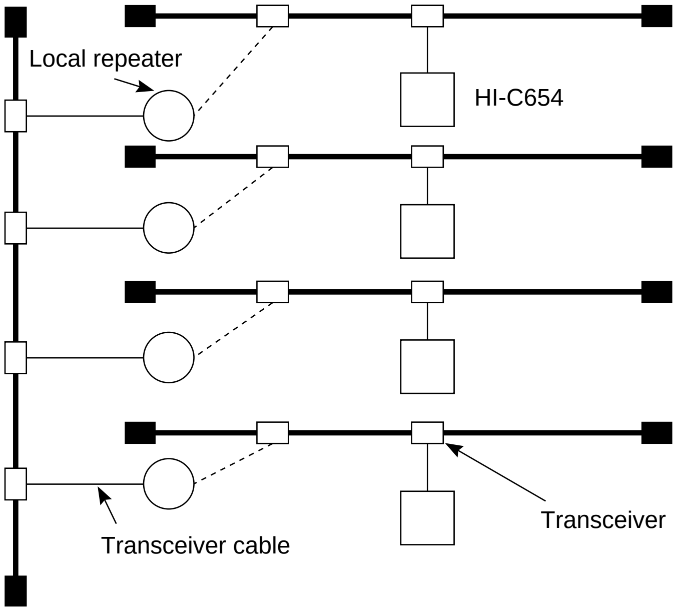
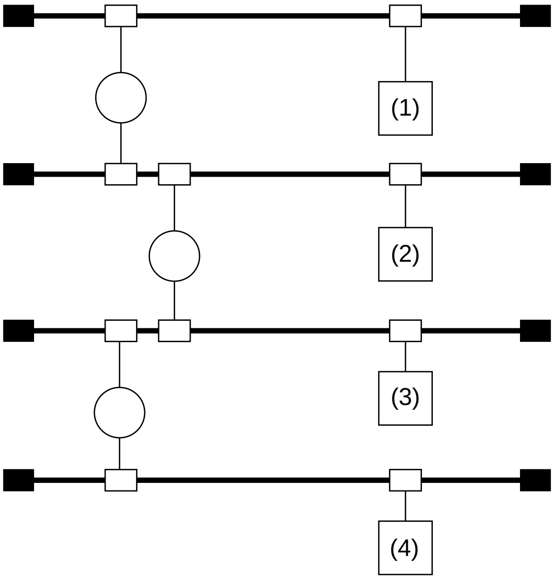
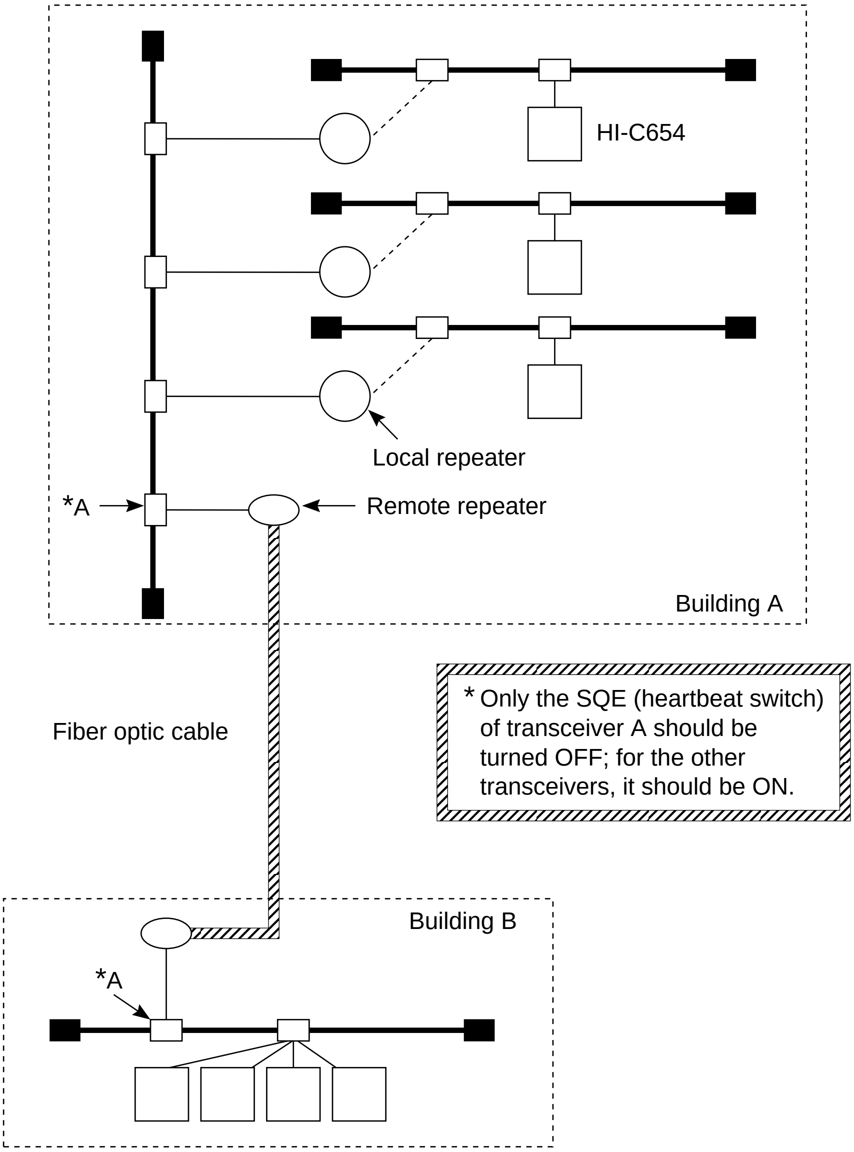

Local repeater
HI-C654
Transceiver
Transceiver cable

(a) Proper connection
The number of repeaters routed is 2 for any two nodes.



(b) Improper combination
The number of repeaters routed between nodes (1) and (4) is 3.

Fig. 2 Example of Local Repeater Connection


HI-C654
Local repeater
*A
Remote repeater
Building A
Fiber optic cable
Building B
*A

* Only the SQE (heartbeat switch) of transceiver A should be turned OFF; for the other transceivers, it should be ON.

Fig. 3 Example of Remote Repeater Connection

10BaseT System Configuration

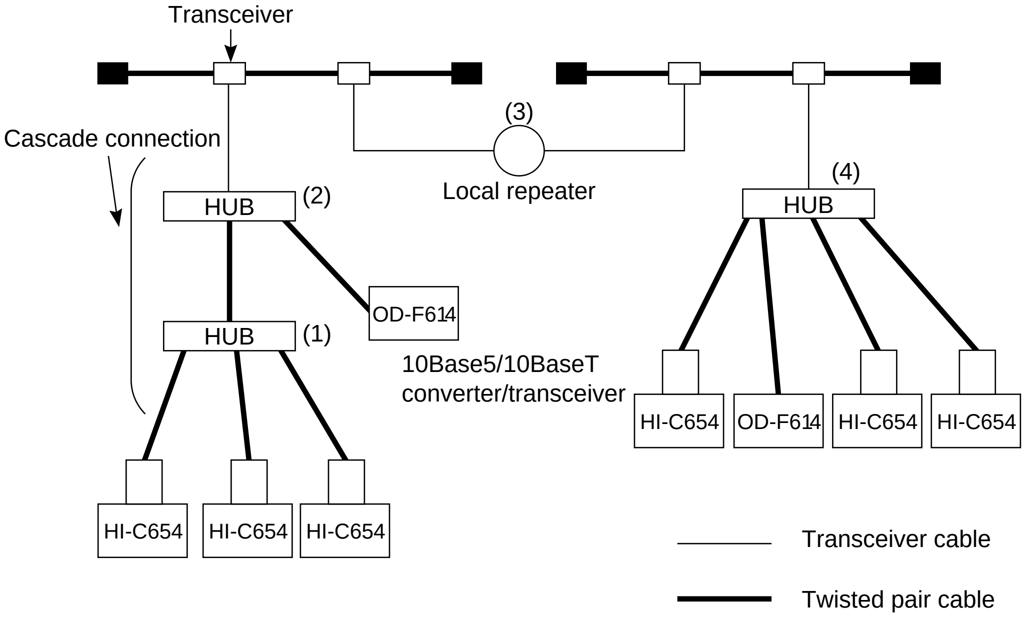

Transceiver
Cascade connection
(3)
Local repeater
(4)
HUB
(2)
HUB
(1)
OD-F614
10Base5/10BaseT
converter/transceiver
HI-C654
OD-F614
HI-C654
HI-C654
HI-C654
HI-C654
HI-C654
Transceiver cable
Twisted pair cable

Fig. 4 Hub Connection Setup No. 1

Restrictions

1. Maximum length of twisted pair cable = 100 m.
2. SQE switch on transceiver linking HUB and local repeater should be OFF; all others should be ON.

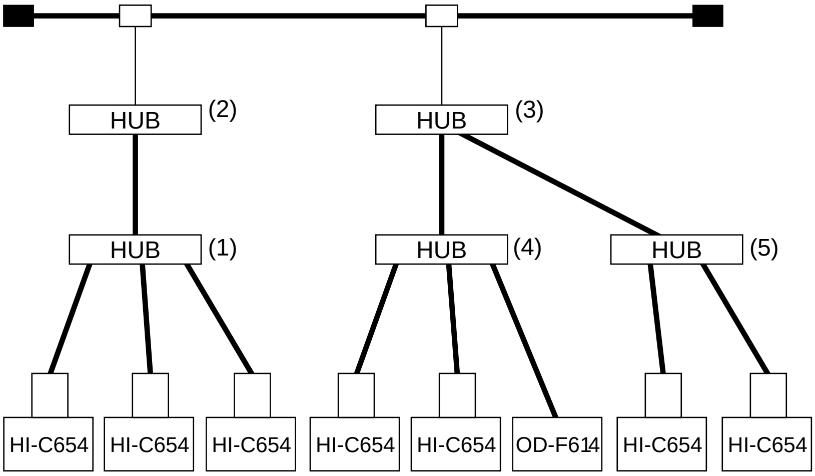

HUB
(2)
HUB
(3)
HUB
(1)
HUB
(4)
HUB
(5)
HI-C654
HI-C654
HI-C654
HI-C654
HI-C654
OD-F614
HI-C654
HI-C654

Fig. 5 Hub Connection Setup No. 2

Table 2 Recommended Items

Item Name	Allied Telsis	Showa Electric Wire & Cable
8-port HUB	Centre COM MR820TR	ETH-807B
12-port HUB	Centre COM 3012TR	ETH-2066
16-port HUB	Centre COM 3016TR	ETH-707A
MAU (10Base5/T converter/ transceiver)		SLP-E001A
Twisted pair cable	Twisted pair cable 3 m to 100 m category 5 (see Note 1)	SECM-04-3M to SECM-04-100M (see Notes 1 and 2)

TAP4A002.EPS

Hitachi Electric Wire & Cable HSN-900B is also suitable for use with the MAU.

Notes:

1. Category 5 cable is preferred to category 3 cable (which is about 20% cheaper as at December 1996) because it is more widely available and is also compatible with future conversion to 100BaseT.
2. Underlining indicates cable length.

Port number for cascade connection

The port used for cascade connection varies between models. The Centre COM MR820TR uses port 8, while all other Allied Telsys models use port 1. All Showa Electric Wire & Cable models use port 1.

Precautions for Router Installation

A router is used to implement image transmission between two remote institutions via ISDN. Its installation-related information and acceptance procedures are set forth below.

1. Preconditions

(1) ISDN Service Contract

An ISDN service contract should be entered with NTT under the line switching (INS-C) system.

(2) Router Requirements

A router for connection between Ethernet and ISDN is exclusively limited to the model stipulated below, at present. (Other units should not be used.)

Seiko Instruments: NS-2082CL

(3) Installation Environments

Installation environments for the router and HIC (address setup, etc.) should be notified in advance to Seiko Instruments' personnel concerned. Installation, including address setting for the router, will be done remotely via ISDN in accordance with the installation environments notified.

2. Installation Procedures

It is assumed that the network devices and ISDN installation that comply with the above requirements already exist.

(1) Installing a Router

A router is connected to Ethernet via a transceiver cable. It is treated as a node connected to the network in a similar manner to the HI-C654.

A. Installation of Router
The router may be placed either vertically or horizontally, depending on the place where it is to be installed. To place the router vertically, attach a stand to it; to place horizontally, attach rubber feet.

B. Connection to ISDN
Plug the connector of the ISDN cable into the ISDN port connector of the router. Then, plug the other connector of the ISDN cable to the rosette (8-pin modular jack port) connected to the DSU.

C. Connection to Ethernet
Connect a transceiver cable to the 10BASE5 connector located on the rear of the router. (The other end of the transceiver cable should have been hooked up to the transceiver connected to Ethernet.)

When above connections are completed, connect a 100 V AC power cable. After that, checking that the System FD (note that it is not the Diagnostic FD) is inserted, power ON.
For more detail, refer to Chapter 2 “Installation and Connection” of the instruction manual of the router.

Formatting and Copying the System FD of the Router

The router used here is started up from the floppy disk containing the environment settings file(s). Note that the router will be unable to start up if the floppy disk is damaged or is not present in the drive. How to back up system FD is described here.

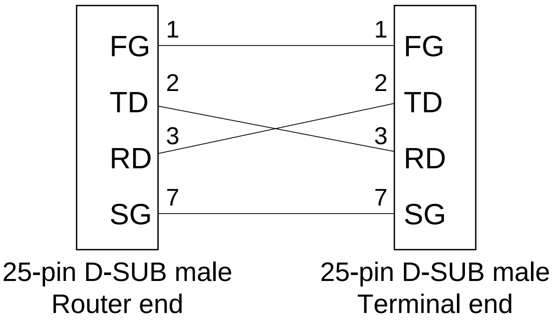
1. Items Necessary for Backup

The router itself is used to format and copy a floppy disk. Items necessary for that are set forth below.

(1) A VT-100 or equivalent CRT terminal with an RS-232C serial interface, or personal computer with a communication facility (software). (The PC should have an RS-232C connector.)

(2) Null modem cable

A 25-pin D-SUB cable. The connector on the router end should be male. The cable wiring is as illustrated below.



2. Backup Procedures

An excerpt of “Formatting and Copying a Floppy Disk” from the instruction manual is attached hereto. A floppy disk should be formatted and copied in accordance with the procedures described.

Formatting and Copying a Floppy Disk

Use the Diagnostic FD to copy and format a floppy disk.

1. Formatting a Floppy Disk

Step 1: Connect a CRT terminal to the port P1 of the router. Then, insert the Diagnostic FD into the floppy disk drive, and power ON.

Step 2: The following messages appear. Type in test command “10” and hit the [CR] key.

```
(test command)
0  automatic mode
1  timer test
2  led test
3  memory test
4  dma test
5  interrupt test
6  c/s register test
7  serial I/O test
8  fdc test
9  IEEE802.3 test
10 FD format
11 FD diskcopy
61 IIF board test
(TOP)     top menu

DIAG>
```

Step 3: When prompted, remove the Diagnostic FD from the floppy disk drive. Checking that the write-protect tab of a 3.5-inch 2HD floppy disk to be formatted is write-enabled, insert the floppy disk and then hit the [Y] and [CR] keys.

```
DIAG>10 [CR]
FD format
please insert new fld and [Y/N]: Y [CR]
```

Step 4: When “Y” is entered, formatting starts. When formatting is done, the following message appears.

```
>>>>> FD format ok <<<<<<
```

If the floppy disk to be formatted is write-protected, the following message appears, and the disk is not formatted. Put the write-protect tab of the floppy disk in the write-enabled position, and repeat from Step 3.

```
DIAG>10 [CR]
FD format

please insert new fld and [Y/N]: Y [CR]
! write protected fld
please insert new fld and [Y/N]:
```

CAUTION

Floppy disks other than 3.5-inch 2HD cannot be formatted.

2. Copying a Floppy Disk

For disk copy, the entire files on a floppy disk can be copied. File-by-file copying cannot be accomplished, however.

Step 1: Invoke a troubleshooting program menu in accordance with Step 1 described in the preceding paragraph, and type in test command 11 and hit the [CR] key.

Step 2: When the following message appear, remove the Diagnostics FD from the floppy disk drive, and then insert a source floppy disk and hit the [Y] and [CR] keys.

```
DIAG>11 [CR]
FD diskcopy
please insert source (read) fld and [Y/N]: Y [CR]
```

Step 3: When “Y” is entered, reading starts, with the following message displayed.

```
...reading start
```

Step 4: When the reading is done, the following message appears. Then, insert a destination floppy disk and hit the [Y] and [CR] keys.

```
please insert destination (write) fld and [Y/N]: Y [CR]
```

Step 5: When “Y” is entered, writing starts, with the following message displayed.

```
... writing start
```

Step 6: When the writing is done, the following message appears. Then, insert the source floppy disk again, and hit the [Y] and [CR] keys.

```
please insert source (read) fld and [Y/N]: Y [CR]
```

Step 7: Repeat Steps 3 through 5 until the writing is all completed. Then, the following message appears.

```
>>>>> FD diskcopy ok <<<<<<
DIAG>
```

CAUTION

A disk copy cannot be done on a floppy disk other than 3.5-inch 2HD, or on a write-protected or unformatted floppy disk.

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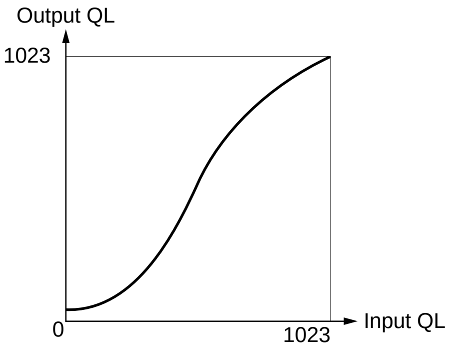
Chapter 2 Service Utility-Additional Instructions

1. Supplementary Explanation for Setting LUT Content

1.1 Summary of BAR (Basic curve ARranging) Tone Correction

With BAR tone correction, its gamma table (reference gamma curve, gamma tables No. 1 to 20) represents a relationship between input QL (quantum level) and output QL. The QL is image data that represents the density per pixel, and is denoted by a 10-bits digital value (integer value from 0 to 1023).
Note that the gamma table is represented by a density value in the gamma table file, but it is processed as a QL value within the equipment.



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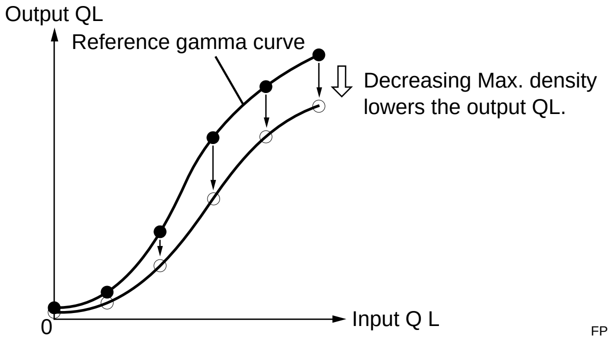
Input/Output Relationship in the Gamma Table (BAR Scheme)

With BAR tone correction, the overall gamma curve is adjusted and varied by tweaking the density or contrast of the reference gamma curve.

● Density Adjustment

Adjust the overall density of the reference gamma curve by varying the Max. density parameter value. The gamma curve is increased or decreased in the output QL direction according to the value of Max. density.
The Max. density input range is from 0 to 100 (unit: %). With Max. density = 100, the gamma curve is equal to the reference gamma curve; decreasing the value of Max. density lowers the overall density.
Note that the density cannot be increased greater than the reference gamma curve.



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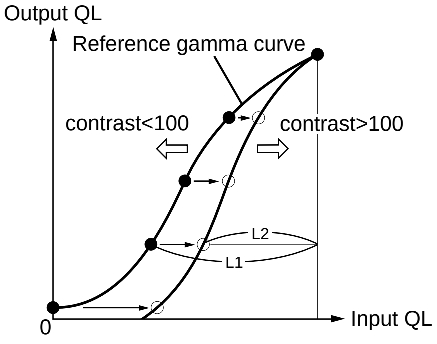
Density Adjustment (BAR Scheme)

- Contrast Adjustment

Adjust the inclination (rise) of the reference gamma curve by varying the contrast parameter value. The gamma curve is increased of decreased in the input QL direction according to the value of contrast. Contrast is equal to the inclination of the tone curve multiplied by 100; in the chart illustrated below, it is represented by a ratio of L1 to L2 (L1/L2 × 100). Its input range is from 10 to 400. With contrast = 100, the gamma curve is equal to the reference gamma curve. The inclination of the gamma curve is gradual with contrast < 100, whereas it is sharp with contrast > 100.

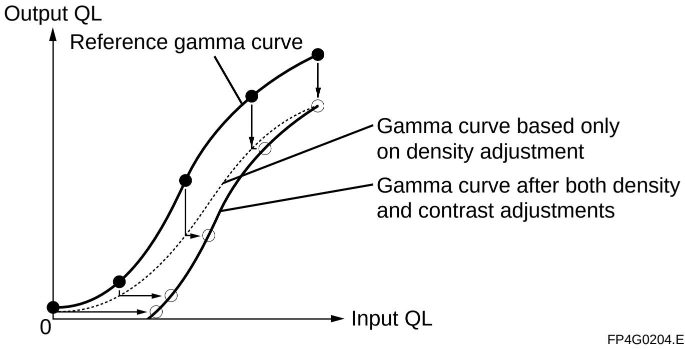


FP4G0203.EPS

Contrast Adjustment (BAR Scheme)

- Combination of Density and Contrast Adjustments

Adjust and vary the gamma curve in combination of density and contrast adjustments.



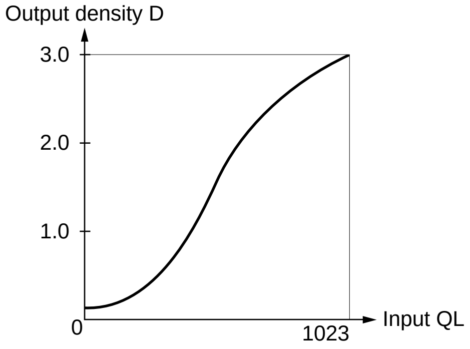
FP4G0204.EPS

Combination of Density and Contrast Adjustments (BAR Scheme)

1.2 Summary of SAR (Smooth curve ARranging) Tone Correction

With SAR tone correction, the gamma curve (reference gamma curve, gamma tables No. 11 to 50) represents a relationship between input QL (quantum level) and output density D. The QL is image data that represents the density per pixel, and is denoted by a 10-bits digital value (integer value from 0 to 1023).

Note that with SAR tone correction, the conversion table that corresponds to the density on output film can be represented.



FP4G0205.EPS

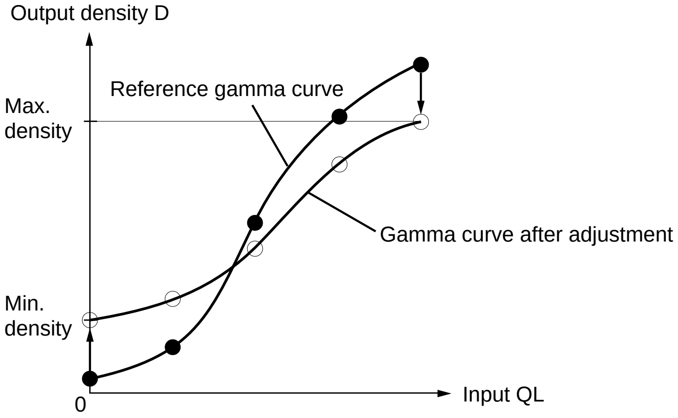
Input/Output Relationship in the Gamma Table (SAR Scheme)

With SAR tone correction, the gamma curve is adjusted and varied by wholly or partially tweaking the reference gamma curve.

● Overall Adjustment (Adjustment of maximum and minimum density)

Adjust the overall density of the reference gamma curve by varying the Max. density and Min. density parameter values. The gamma curve is increased or decreased in the input density D direction according to the value of Max. density and Min. density.

The input range for Max. density and Min. density is from 0 to 300 (corresponding to 0 to 3.00 in density), provided that Min. density < Max. density.



FP4G0206.EPS

Overall Adjustment (SAR Scheme)

- Partial Adjustment (Adjustment of density and contrast near specified density)

By varying the shift parameter value, adjust the density at the point specified by parameter density with respect to the gamma curve that has been subjected to the overall adjustment. Also adjust the inclination (rise) of the gamma curve by varying the contrast parameter value.
This partial adjustment can be done at up to five points.

- density (equivalent to “parameter D point” in the MF-300 series)

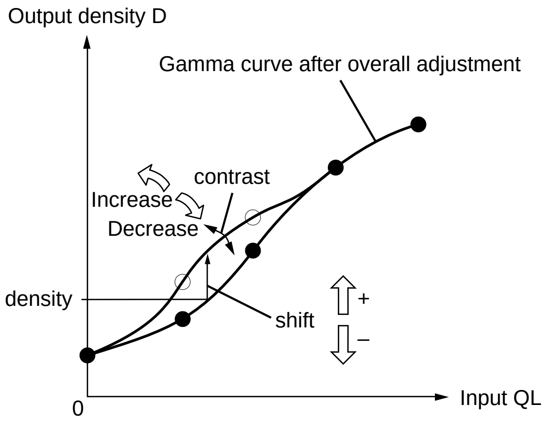
Its input range is from 0 to 300 (corresponding to 0 to 3.00 in density), provided that Min. density < density < Max. density.
The density near the point specified by density is varied, as a rule; however, when the density near the middle of the gamma curve is specified, the density of the gamma curve as a whole is varied.

- shift (equivalent to “parameter D shift” in the MF-300 series)

Its input range is from –100 to +100 (corresponding to –1.00 to +1.00 in density), provided that Min. density < density ± shift < Max. density.

- contrast

Contrast represents the inclination of the gamma curve near the point specified by density after density variation. Its input range is from 10 to 400 (inclination of gamma curve, multiplied by 100). With contrast = 100, there is no variation in the gamma curve inclination; with contrast < 100, it becomes gradual, while it becomes sharp with contrast > 100.



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Partial Adjustment (SAR Scheme)

- Combination of Overall and Partial Adjustments

Adjust and vary the gamma curve in combination of overall and partial adjustments.

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1.3 Gamma Table of BAR Tone Correction

Gamma Table (BAR Scheme)

GAMMA	GAMMA 1	GAMMA 2	GAMMA 3	GAMMA 4	GAMMA 5	GAMMA 6	GAMMA 7	GAMMA 8	GAMMA 9	GAMMA 10
Diag. Unit	CT/MRI	CT/MRI	CT/MRI US	Specific Unit	DSA	CT/MRI	CT/MRI US	CT/MRI	DR	Reserved
0	0.16	0.16	0.1	0.15	0.1	0.1	0.1	0.1	0.1	0
1			0.24		0.24	0.21	0.15	0.26	0.21	0.1
0.16	0.28	0.28								
0.2			0.32		0.28	0.28	0.2	0.32	0.27	0.2
0.3			0.37		0.33	0.34	0.27	0.35	0.33	0.3
0.31	0.36	0.36								
0.4			0.41		0.38	0.39	0.33	0.39	0.39	0.4
0.47	0.46	0.46								
0.5			0.46		0.42	0.44	0.39	0.43	0.43	0.5
0.6			0.52		0.46	0.5	0.46	0.47	0.48	0.6
0.62	0.54	0.54								
0.7			0.58		0.5	0.56	0.51	0.51	0.54	0.7
0.78	0.62	0.62								
0.8			0.63		0.55	0.64	0.57	0.56	0.6	0.8
0.9			0.69		0.61	0.71	0.63	0.62	0.67	0.9
0.93	0.7	0.7								
1			0.75		0.66	0.79	0.7	0.67	0.74	1
1.09	0.8	0.78								
1.1			0.8		0.72	0.87	0.78	0.74	0.82	1.1
1.2			0.88		0.78	0.94	0.85	0.8	0.9	1.2
1.24	0.92	0.9								
1.3			0.97		0.84	1.04	0.93	0.88	0.98	1.3
1.4	1.08	1.04	1.05		0.9	1.12	1.01	0.97	1.07	1.4
1.5			1.14		0.98	1.21	1.1	1.07	1.16	1.5
1.55	1.25	1.2								
1.6			1.23		1.08	1.33	1.2	1.17	1.25	1.6
1.7			1.33		1.18	1.44	1.29	1.28	1.35	1.7
1.71	1.45	1.35								
1.8			1.42		1.29	1.57	1.38	1.39	1.46	1.8
1.86	1.65	1.55								
1.9			1.53		1.42	1.69	1.49	1.51	1.58	1.9
2			1.64		1.56	1.81	1.61	1.63	1.7	2
2.02	1.86	1.78								
2.1			1.76		1.73	1.92	1.72	1.78	1.82	2.1
2.17	2.05	2.02								
2.2			1.91		1.88	2.05	1.86	1.94	1.94	2.2
2.3			2.03		2.06	2.2	1.99	2.14	2.08	2.3
2.33	2.25	2.25								
2.4			2.17		2.24	2.34	2.14	2.32	2.2	2.4
2.49	2.45	2.45								
2.5			2.36		2.39	2.47	2.32	2.46	2.35	2.5
2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64	2.64

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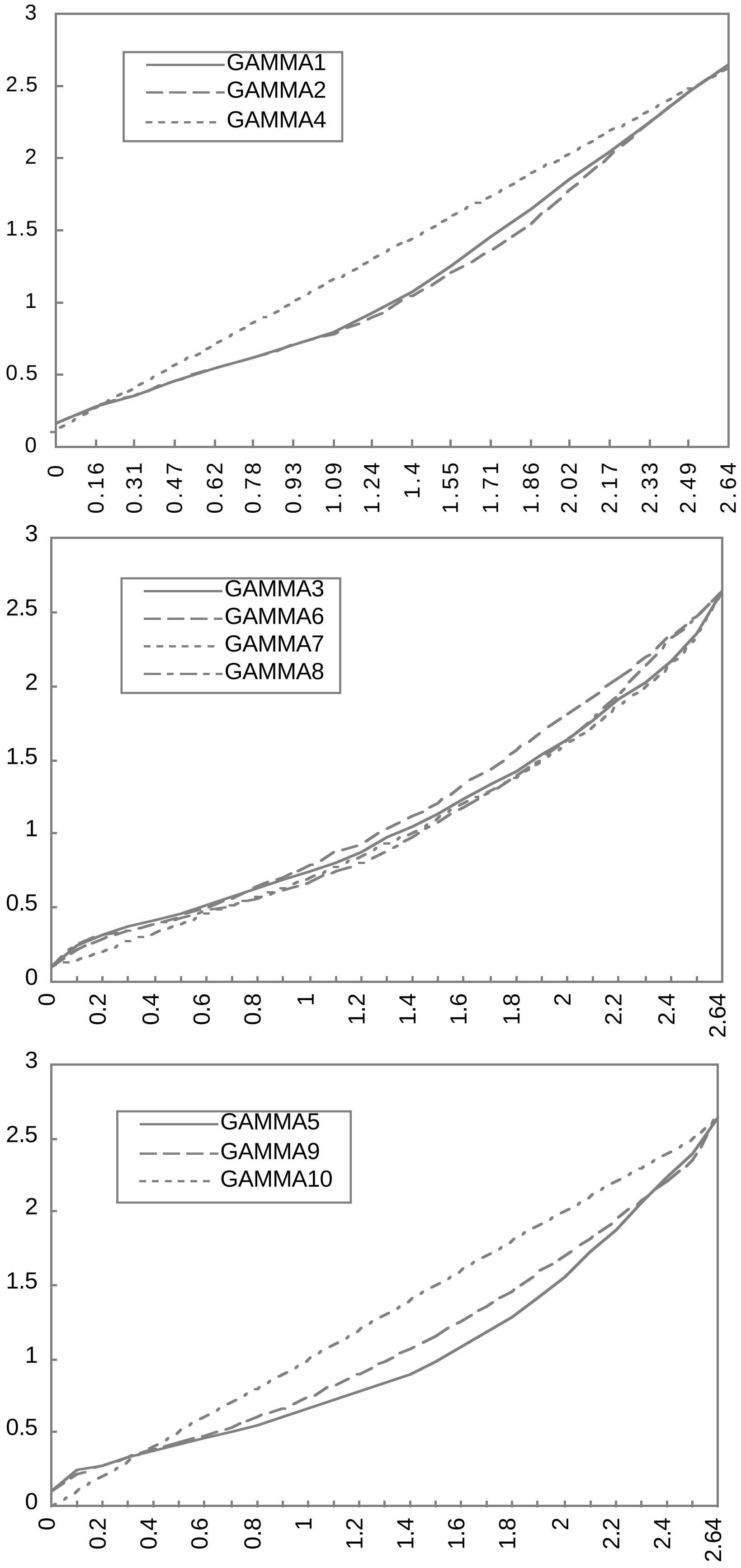
(Note) Diag. Unit listed in the table provides a reference for domestic use in Japan.



Gamma Curves in Each Table (BAR Scheme)

1.4 Gamma Table of BAR Tone Correction (for TOSHIBA modality)

Gamma Table (BAR Scheme, for TOSHIBA Modality)

GAMMA	GAMMA 11	GAMMA 12	GAMMA 13	GAMMA 14	GAMMA 15	GAMMA 16	GAMMA 17	GAMMA 18	GAMMA 19	GAMMA 20
Diag. Unit	MRI Flexart (1)	MRI Flexart (2)	Reserved	Y Value, Linear	RI (Clear-based, Linear)	RI (Blue-based, Linear)	Dmax3.0 (Clear-based, Linear)	Dmax3.0 (Blue-based, Linear)	IIDR (Clear-based, Linear) Dmax2.7	IIDR (Blue-based, Linear) Dmax2.7
0	0.2	0.48	0	0.15	0.23	0.23	0.17	0.17	0.17	0.17
0.05					0.33	0.36	0.29	0.31	0.28	0.31
0.1	0.24	0.5	0.1		0.38	0.44	0.37	0.42	0.36	0.4
0.15						0.5		0.5		0.49
0.2	0.28	0.52	0.2		0.46	0.53	0.47	0.55	0.45	0.53
0.3	0.33	0.54	0.3		0.55	0.61	0.57	0.65	0.54	0.62
0.4	0.4	0.57	0.4		0.63	0.69	0.68	0.75	0.63	0.71
0.5	0.46	0.6	0.5		0.72	0.77	0.78	0.85	0.73	0.8
0.6	0.51	0.62	0.6		0.81	0.85	0.88	0.95	0.82	0.89
0.7	0.54	0.65	0.7		0.89	0.93	0.98	1.05	0.91	0.97
0.8	0.58	0.69	0.8		0.98	1	1.08	1.15	1	1.06
0.9	0.62	0.72	0.9		1.06	1.08	1.18	1.25	1.09	1.15
1	0.66	0.75	1		1.15	1.16	1.28	1.35	1.18	1.24
1.1	0.7	0.79	1.1		1.24	1.24	1.39	1.44	1.28	1.33
1.2	0.74	0.84	1.2		1.32	1.31	1.5	1.54	1.37	1.42
1.3	0.79	0.88	1.3		1.4	1.39	1.6	1.64	1.46	1.51
1.4	0.84	0.93	1.4		1.49	1.48	1.7	1.74	1.55	1.6
1.5	0.89	0.98	1.5		1.58	1.55	1.8	1.84	1.64	1.68
1.6	0.94	1.05	1.6		1.66	1.62	1.91	1.94	1.74	1.77
1.7	1	1.12	1.7		1.75	1.71	2.01	2.04	1.84	1.86
1.8	1.06	1.19	1.8		1.83	1.79	2.11	2.14	1.93	1.95
1.9	1.14	1.28	1.9		1.92	1.86	2.2	2.22	2.02	2.04
2	1.23	1.38	2		2.01	1.94	2.28	2.3	2.11	2.13
2.1	1.33	1.5	2.1		2.09	2.02	2.35	2.37	2.19	2.21
2.2	1.46	1.64	2.2		2.17	2.1	2.42	2.43	2.27	2.27
2.3	1.62	1.82	2.3		2.24	2.17	2.48	2.49	2.33	2.34
2.4	1.84	2.08	2.4		2.3	2.24	2.53	2.54	2.39	2.4
2.5	2.13	2.4	2.5		2.36	2.29	2.58	2.58	2.45	2.45
2.64	2.64	2.64	2.64	2.64	2.44	2.36	2.64	2.64	2.52	2.52

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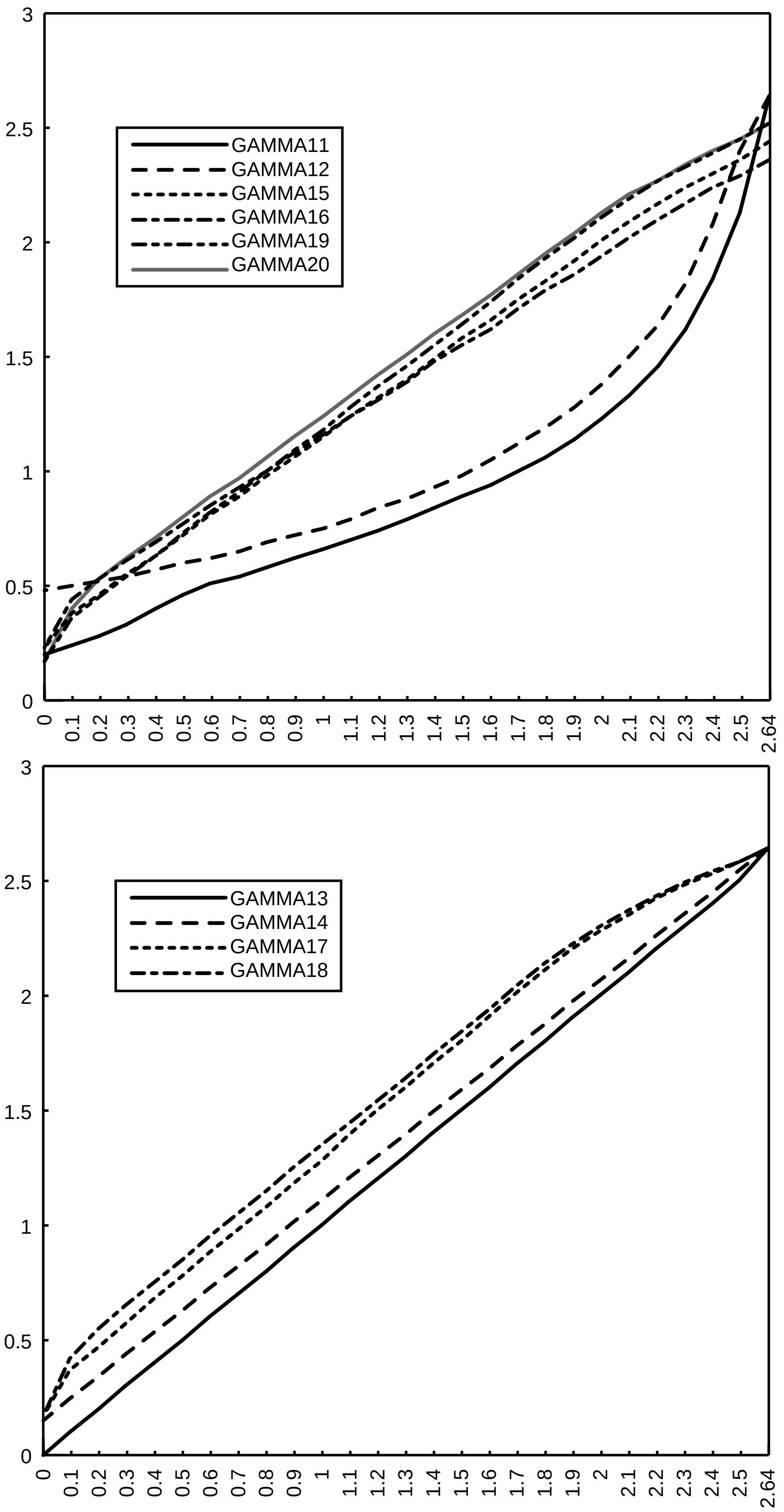
(Note) Diag. Unit listed in the table provides a reference for domestic use in Japan.



Gamma Curves in Each Table (BAR Scheme, for TOSHIBA Modality)

1.5 Gamma Table of SAR Tone Correction

Gamma Table (SAR Scheme) (1/3)

GAMMA No.	GAMMA 11	GAMMA 12	GAMMA 13	GAMMA 14	GAMMA 15	GAMMA 16	GAMMA 17	GAMMA 18
Diag. Unit	CT	MR	DSA	RI	DR	WS	Linear-tone Blue Base	Linear-tone Clear Base
QL Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value
0	0.191	0.225	0.308	0.191	0.170	0.177	0.150	0.050
22	0.199	0.237	0.320	0.196	0.179	0.187	0.211	0.113
44	0.207	0.248	0.337	0.201	0.188	0.198	0.271	0.176
65	0.215	0.260	0.359	0.207	0.195	0.212	0.332	0.238
87	0.223	0.285	0.379	0.215	0.201	0.230	0.393	0.301
109	0.232	0.320	0.396	0.222	0.209	0.254	0.453	0.364
131	0.244	0.348	0.412	0.230	0.219	0.298	0.514	0.427
152	0.259	0.376	0.432	0.239	0.231	0.365	0.574	0.489
174	0.285	0.404	0.452	0.250	0.239	0.427	0.635	0.552
196	0.320	0.438	0.474	0.265	0.249	0.488	0.696	0.615
218	0.353	0.469	0.497	0.287	0.263	0.556	0.756	0.678
239	0.379	0.505	0.519	0.317	0.289	0.623	0.817	0.740
261	0.407	0.542	0.545	0.348	0.322	0.688	0.878	0.803
283	0.438	0.576	0.576	0.382	0.356	0.761	0.938	0.866
305	0.474	0.609	0.607	0.415	0.390	0.837	0.999	0.929
326	0.517	0.646	0.632	0.449	0.430	0.899	1.060	0.991
348	0.559	0.683	0.660	0.488	0.469	0.961	1.120	1.054
370	0.595	0.716	0.694	0.525	0.508	1.031	1.181	1.117
392	0.632	0.750	0.728	0.564	0.550	1.107	1.241	1.180
414	0.674	0.784	0.764	0.607	0.594	1.180	1.302	1.243
435	0.722	0.823	0.801	0.649	0.641	1.253	1.363	1.305
457	0.772	0.865	0.846	0.691	0.688	1.327	1.423	1.368
479	0.820	0.913	0.891	0.733	0.733	1.400	1.484	1.431
501	0.865	0.961	0.933	0.778	0.777	1.473	1.545	1.494
522	0.910	1.009	0.981	0.826	0.827	1.549	1.605	1.556
544	0.958	1.057	1.031	0.877	0.879	1.622	1.666	1.619
566	1.012	1.116	1.093	0.927	0.931	1.684	1.727	1.682
588	1.071	1.183	1.166	0.981	0.981	1.743	1.787	1.745
609	1.124	1.248	1.248	1.034	1.033	1.802	1.848	1.807
631	1.178	1.315	1.329	1.087	1.086	1.869	1.909	1.870
653	1.228	1.400	1.403	1.144	1.143	1.937	1.969	1.933
675	1.282	1.492	1.470	1.200	1.203	1.999	2.030	1.996
697	1.341	1.571	1.535	1.259	1.269	2.061	2.090	2.059
718	1.405	1.650	1.613	1.321	1.334	2.123	2.151	2.121
740	1.473	1.751	1.692	1.388	1.404	2.197	2.212	2.184
762	1.535	1.852	1.765	1.456	1.472	2.273	2.272	2.247
784	1.599	1.928	1.836	1.523	1.540	2.337	2.333	2.310
805	1.670	1.999	1.909	1.591	1.608	2.387	2.394	2.372
827	1.757	2.083	1.987	1.656	1.676	2.450	2.454	2.435
849	1.844	2.180	2.075	1.720	1.744	2.520	2.515	2.498
871	1.920	2.273	2.167	1.785	1.823	2.585	2.576	2.561
892	1.993	2.365	2.260	1.852	1.901	2.650	2.636	2.623
914	2.080	2.457	2.357	1.923	1.973	2.705	2.697	2.686
936	2.197	2.570	2.465	1.996	2.054	2.770	2.757	2.749
958	2.340	2.685	2.585	2.066	2.165	2.820	2.818	2.812
979	2.515	2.810	2.710	2.143	2.320	2.880	2.879	2.874
1001	2.720	2.910	2.860	2.227	2.517	2.935	2.939	2.937
1023	3.000	3.000	3.000	2.313	2.800	3.000	3.000	3.000

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(Note) Diag. Unit listed in the table provides a reference for domestic use in Japan.

Gamma Table (SAR Scheme) (2/3)

GAMMA No.	GAMMA 21	GAMMA 22	GAMMA 23	GAMMA 24	GAMMA 25	GAMMA 26	GAMMA 27	GAMMA 28	GAMMA 29	GAMMA 30
Corre-sponding BAR GAMMA No.	GAMMA 1	GAMMA 2	GAMMA 3	GAMMA 4	GAMMA 5	GAMMA 6	GAMMA 7	GAMMA 8	GAMMA 9	GAMMA 10
Diag. Unit	CT/MRI	CT/MRI	CT/MRI/ US	Specific Unit	DSA	CT/MRI	CT/MRI/ US	CT/MRI	DR	Reserved
QL Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value
0	0.178	0.178	0.169	0.177	0.169	0.169	0.169	0.170	0.169	0.150
22	0.186	0.186	0.182	0.186	0.182	0.179	0.173	0.184	0.179	0.164
44	0.195	0.195	0.195	0.197	0.194	0.189	0.177	0.199	0.189	0.172
65	0.203	0.203	0.206	0.209	0.199	0.197	0.182	0.207	0.196	0.180
87	0.212	0.212	0.216	0.226	0.205	0.206	0.189	0.215	0.204	0.190
109	0.221	0.221	0.225	0.247	0.213	0.215	0.197	0.219	0.213	0.203
131	0.233	0.233	0.234	0.276	0.222	0.225	0.206	0.226	0.223	0.218
152	0.248	0.248	0.243	0.330	0.231	0.235	0.214	0.235	0.234	0.237
174	0.264	0.264	0.257	0.388	0.240	0.246	0.225	0.244	0.244	0.263
196	0.289	0.289	0.273	0.447	0.249	0.260	0.238	0.254	0.254	0.313
218	0.320	0.320	0.305	0.502	0.262	0.288	0.257	0.267	0.274	0.377
239	0.349	0.349	0.338	0.562	0.276	0.318	0.278	0.285	0.297	0.435
261	0.380	0.380	0.377	0.618	0.298	0.356	0.307	0.307	0.334	0.497
283	0.411	0.411	0.412	0.677	0.324	0.400	0.340	0.333	0.371	0.560
305	0.442	0.442	0.443	0.737	0.355	0.449	0.377	0.365	0.409	0.620
326	0.474	0.474	0.476	0.792	0.389	0.491	0.412	0.400	0.449	0.680
348	0.507	0.507	0.512	0.853	0.425	0.535	0.448	0.438	0.491	0.743
370	0.543	0.539	0.551	0.907	0.457	0.583	0.490	0.470	0.535	0.803
392	0.582	0.570	0.588	0.967	0.489	0.632	0.534	0.502	0.579	0.865
414	0.621	0.601	0.618	1.023	0.527	0.683	0.585	0.545	0.630	0.927
435	0.664	0.642	0.655	1.083	0.562	0.728	0.630	0.585	0.678	0.987
457	0.714	0.691	0.705	1.140	0.599	0.771	0.672	0.620	0.727	1.048
479	0.763	0.741	0.757	1.198	0.636	0.826	0.719	0.667	0.776	1.110
501	0.825	0.795	0.812	1.253	0.672	0.888	0.768	0.713	0.826	1.173
522	0.885	0.847	0.861	1.313	0.710	0.938	0.816	0.770	0.879	1.232
544	0.949	0.903	0.913	1.370	0.750	0.988	0.868	0.827	0.935	1.293
566	1.017	0.967	0.969	1.427	0.799	1.044	0.922	0.885	0.990	1.355
588	1.085	1.032	1.024	1.485	0.852	1.106	0.980	0.948	1.044	1.417
609	1.153	1.091	1.077	1.543	0.911	1.176	1.039	1.010	1.097	1.477
631	1.231	1.150	1.135	1.600	0.972	1.246	1.098	1.073	1.156	1.538
653	1.308	1.208	1.196	1.660	1.031	1.314	1.155	1.143	1.218	1.600
675	1.388	1.280	1.254	1.718	1.099	1.392	1.211	1.210	1.286	1.663
697	1.470	1.363	1.310	1.775	1.170	1.473	1.268	1.277	1.355	1.723
718	1.549	1.442	1.375	1.833	1.245	1.545	1.332	1.350	1.425	1.783
740	1.631	1.530	1.442	1.890	1.326	1.620	1.400	1.423	1.499	1.845
762	1.714	1.620	1.510	1.950	1.412	1.692	1.474	1.497	1.573	1.907
784	1.796	1.710	1.581	2.005	1.505	1.763	1.546	1.575	1.647	1.970
805	1.870	1.804	1.652	2.065	1.605	1.829	1.612	1.667	1.717	2.027
827	1.947	1.903	1.737	2.123	1.702	1.903	1.691	1.763	1.791	2.090
849	2.028	2.002	1.828	2.193	1.793	1.985	1.777	1.863	1.866	2.160
871	2.114	2.099	1.908	2.267	1.904	2.075	1.859	1.980	1.951	2.237
892	2.197	2.192	1.982	2.350	2.013	2.177	1.937	2.100	2.034	2.317
914	2.299	2.299	2.069	2.435	2.137	2.290	2.028	2.237	2.115	2.410
936	2.416	2.416	2.176	2.530	2.263	2.410	2.134	2.380	2.207	2.505
958	2.533	2.533	2.332	2.625	2.394	2.540	2.275	2.515	2.333	2.610
979	2.674	2.674	2.519	2.740	2.560	2.678	2.466	2.655	2.507	2.720
1001	2.837	2.837	2.760	2.865	2.780	2.839	2.733	2.820	2.753	2.860
1023	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000

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(Note) Diag. Unit listed in the table provides a reference for domestic use in Japan.

Gamma Table (SAR Scheme) (3/3)

GAMMA No.	GAMMA 41	GAMMA 42	GAMMA 43	GAMMA 44	GAMMA 45	GAMMA 47	GAMMA 19	GAMMA 49	GAMMA 36
Diag. Unit	Siemens Somatom	Siemens Magnetom	Siemens Fluorospot-H	Siemens Polytron	Siemens Digiscan	Philips Gyroscan NT	Philips Easy Vision Perceptual Linear	Fuji QA-WS771	DICOM GSDF (Grayscale Standard Display Function) Curve
QL Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value	Density Value
0	0.200	0.190	0.200	0.190	0.190	0.160	0.200		0.207
22	0.212	0.206	0.219	0.203	0.212	0.179	0.230		0.241
44	0.218	0.225	0.243	0.218	0.244	0.202	0.259		0.283
65	0.229	0.246	0.263	0.237	0.267	0.227	0.288		0.318
87	0.242	0.267	0.287	0.255	0.300	0.254	0.318		0.352
109	0.257	0.295	0.310	0.270	0.330	0.283	0.348		0.394
131	0.278	0.328	0.333	0.292	0.357	0.313	0.379		0.429
152	0.303	0.360	0.360	0.317	0.382	0.341	0.411		0.471
174	0.328	0.390	0.385	0.340	0.407	0.373	0.442		0.507
196	0.353	0.420	0.410	0.365	0.430	0.405	0.475		0.549
218	0.380	0.458	0.436	0.395	0.455	0.438	0.508		0.585
239	0.403	0.490	0.463	0.427	0.480	0.476	0.542		0.620
261	0.435	0.522	0.490	0.458	0.510	0.515	0.577		0.663
283	0.467	0.553	0.520	0.488	0.540	0.553	0.613		0.699
305	0.497	0.585	0.550	0.520	0.565	0.594	0.649		0.743
326	0.530	0.615	0.587	0.553	0.592	0.634	0.686		0.780
348	0.567	0.647	0.623	0.590	0.623	0.674	0.724		0.824
370	0.607	0.678	0.660	0.627	0.655	0.716	0.762		0.861
392	0.643	0.705	0.697	0.663	0.685	0.757	0.801		0.906
414	0.685	0.737	0.743	0.700	0.723	0.799	0.841		0.944
435	0.728	0.770	0.783	0.743	0.760	0.845	0.881		0.982
457	0.772	0.807	0.827	0.793	0.795	0.895	0.923		1.028
479	0.815	0.850	0.868	0.843	0.837	0.944	0.965		1.067
501	0.858	0.890	0.913	0.900	0.880	0.994	1.008		1.114
522	0.905	0.933	0.955	0.960	0.923	1.048	1.051		1.154
544	0.955	0.975	0.998	1.020	0.963	1.108	1.096		1.203
566	1.010	1.027	1.047	1.082	1.010	1.170	1.142		1.245
588	1.065	1.073	1.097	1.145	1.053	1.230	1.190		1.295
609	1.122	1.125	1.145	1.207	1.102	1.289	1.239		1.338
631	1.180	1.172	1.197	1.265	1.152	1.354	1.289		1.382
653	1.247	1.223	1.253	1.328	1.210	1.420	1.342		1.435
675	1.317	1.265	1.317	1.390	1.267	1.488	1.397		1.481
697	1.383	1.310	1.383	1.450	1.330	1.557	1.454		1.538
718	1.457	1.358	1.450	1.523	1.403	1.625	1.515		1.586
740	1.533	1.407	1.520	1.600	1.477	1.698	1.579		1.647
762	1.612	1.457	1.600	1.690	1.550	1.773	1.647		1.699
784	1.693	1.505	1.683	1.783	1.625	1.856	1.719		1.765
805	1.780	1.555	1.770	1.877	1.705	1.935	1.796		1.822
827	1.865	1.612	1.862	1.967	1.787	2.018	1.879		1.883
849	1.953	1.670	1.960	2.060	1.865	2.109	1.969		1.960
871	2.037	1.783	2.060	2.147	1.967	2.204	2.065		2.029
892	2.127	1.907	2.163	2.243	2.067	2.306	2.169		2.120
914	2.223	2.027	2.255	2.337	2.177	2.407	2.282		2.203
936	2.325	2.150	2.360	2.435	2.300	2.507	2.405		2.318
958	2.440	2.267	2.495	2.520	2.425	2.612	2.538		2.429
979	2.550	2.390	2.640	2.615	2.565	2.726	2.683		2.564
1001	2.665	2.520	2.810	2.705	2.710	2.855	2.841		2.782
1023	2.800	2.650	3.000	2.810	2.900	3.000	3.000		2.999

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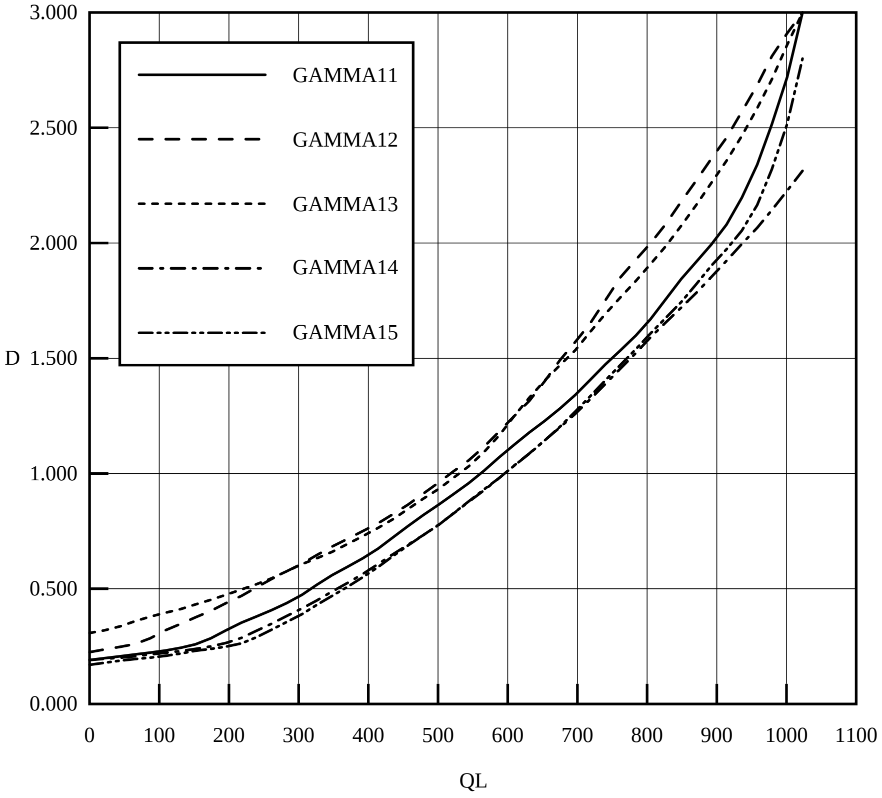
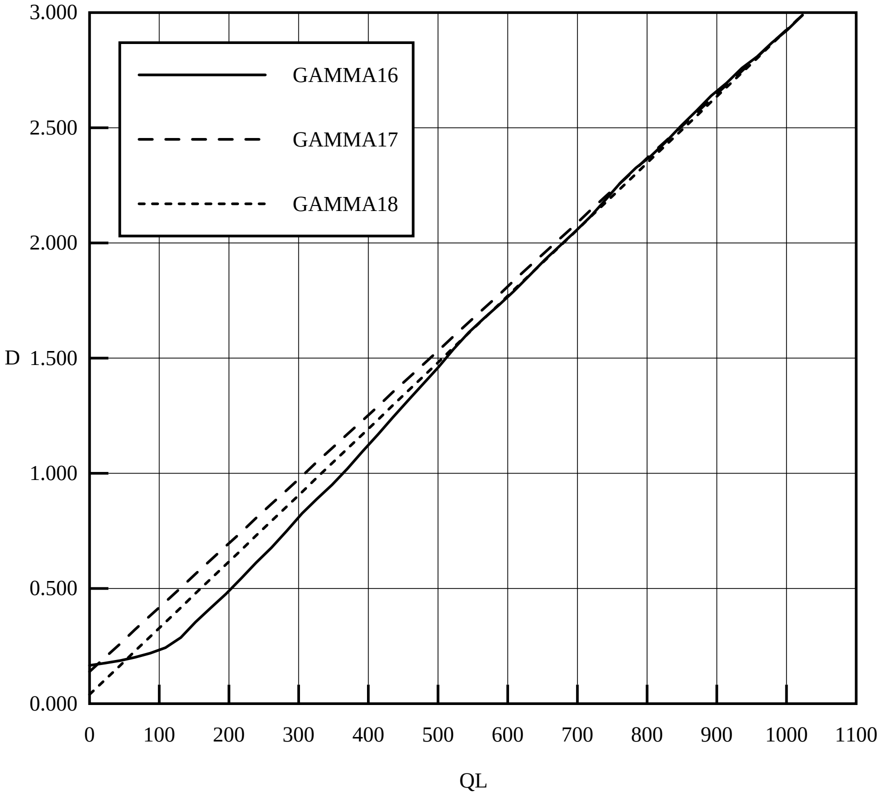
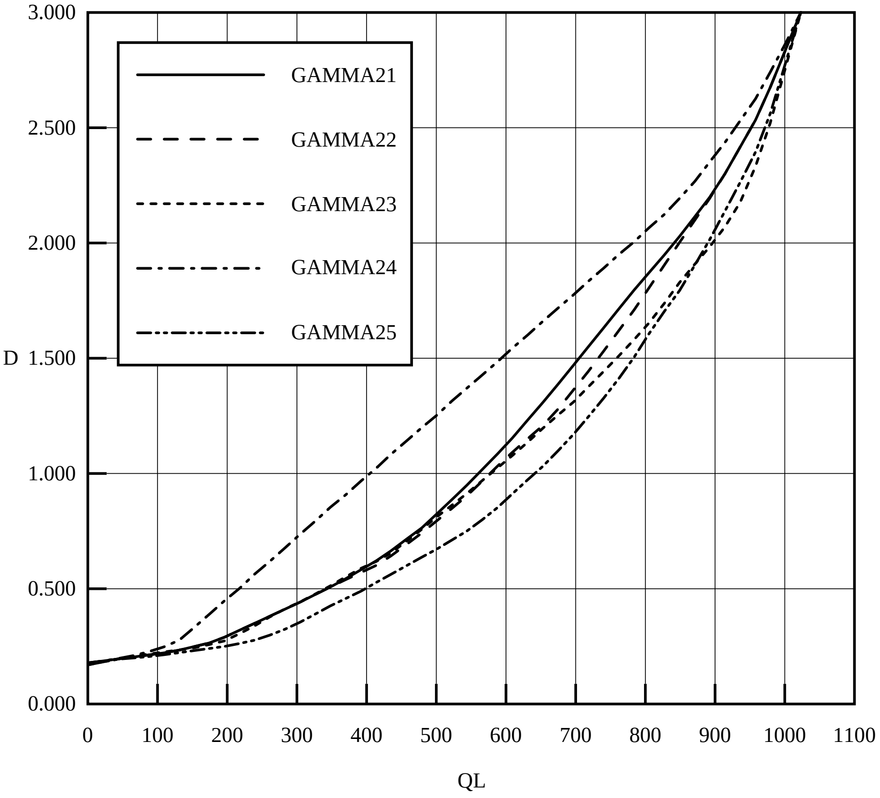
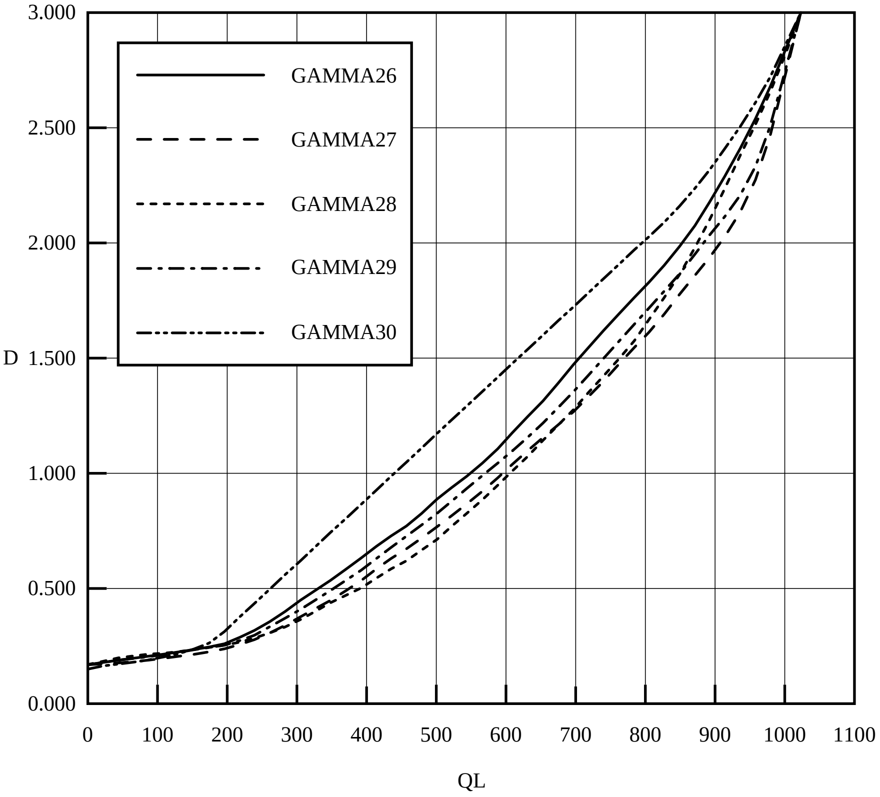
(Note) Diag. Unit listed in the table provides a reference for domestic use in Japan.
Gamma 49 for Fuji QA-WS771 does not process tone correction.



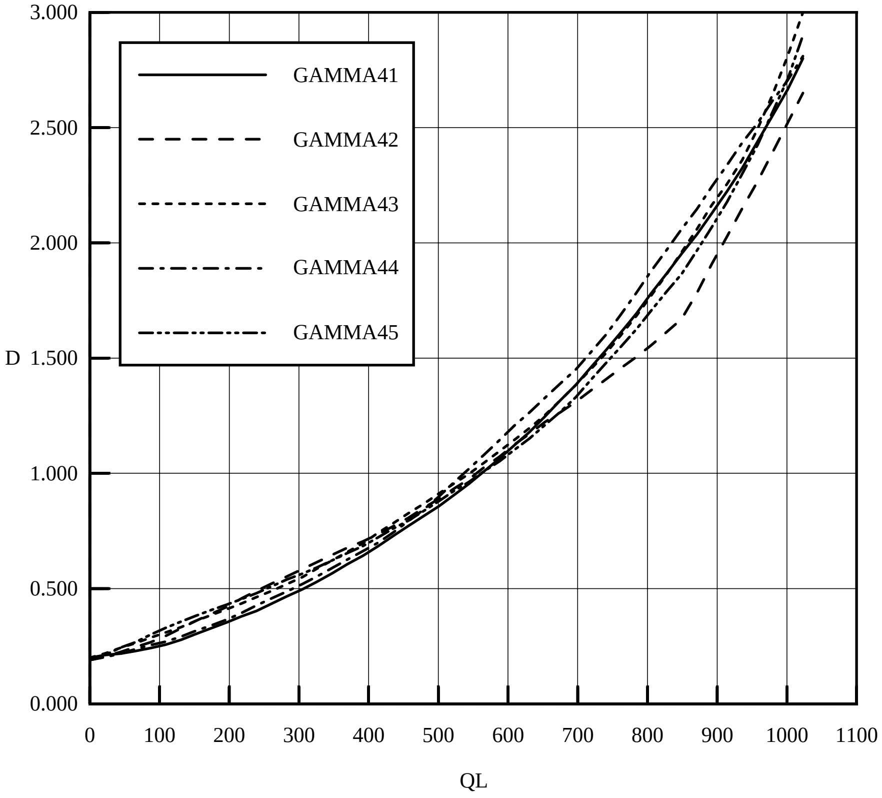


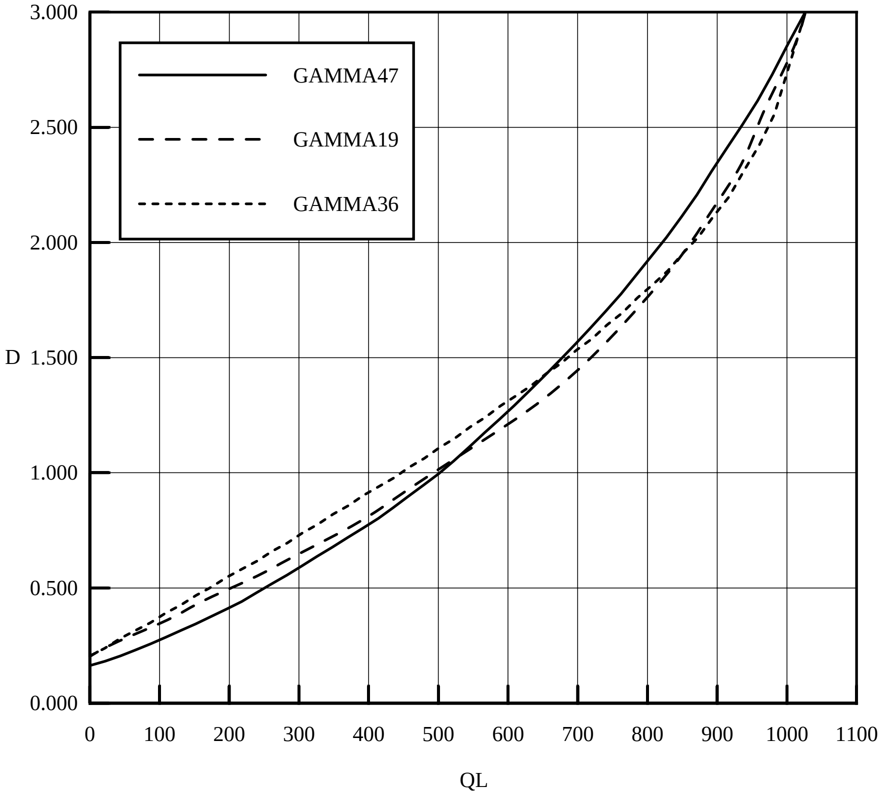
Gamma Curves in Each Table (SAR Scheme) (1/3)





Gamma Curves in Each Table (SAR Scheme) (2/3)





Gamma Curves in Each Table (SAR Scheme) (3/3)

2. Supplementary Explanation for IPU Settings

2.1 Overview and Supplementary Explanation for Display of Film Character Area (IPU Settings 23 and 26 to 36)

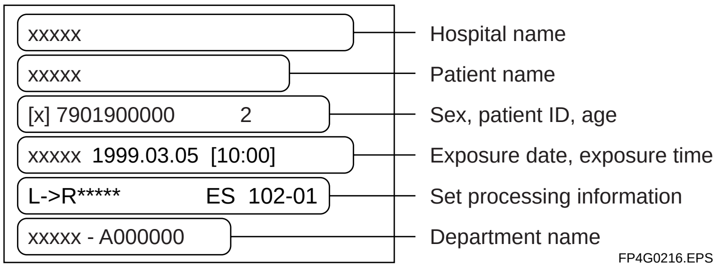
This section summarizes and explains the display of film character area 0 and area 1 that are used to output image with the film character area overlapping the image area. These settings are needed for the output format of the film when the IPU function (supporting software A03 or later) is used.

● Overview

The film character area is displayed as following formats.

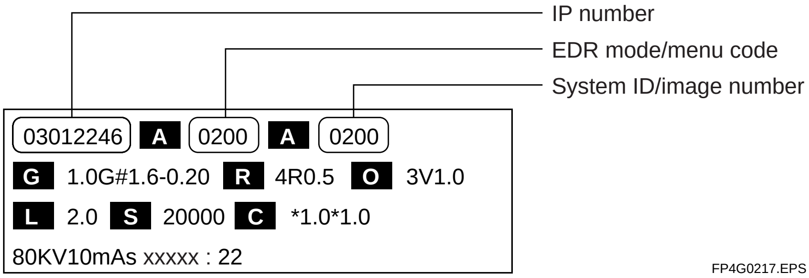
- Area 0

Data concerning hospital name, patient name, sex, patient ID, age or birth date, exposure date, exposure time, set processing information, and department name is displayed and printed out in this area.
An example of display of area 0 is shown below.


xxxxx
xxxxx
[x] 7901900000 2
xxxxx 1999.03.05 [10:00]
L->R***** ES 102-01
xxxxx - A000000
Hospital name
Patient name
Sex, patient ID, age
Exposure date, exposure time
Set processing information
Department name
FP4G0216.EPS

- Area 1

Data concerning IP number, EDR mode/menu code, system ID/image number, image condition, normalization condition/correction item, engineer code, exposure bed information, and compression code is displayed and printed out in this area.
An example of display of area 1 is shown below.


IP number
EDR mode/menu code
System ID/image number
03012246 A 0200 A 0200
G 1.0G#1.6-0.20 R 4R0.5 O 3V1.0
L 2.0 S 20000 C *1.0*1.0
80KV10mAs xxxxx : 22
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The output position and display position (rotating position) on the film can be set for each area (0 and 1).

● Supplementary Explanation of Settings

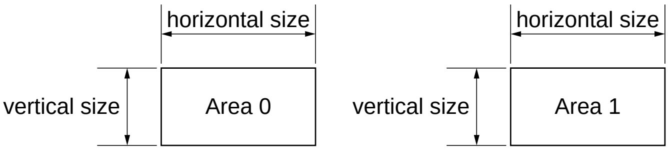
This section explains settings of area 0 and area 1.

- Selecting Display Area

The [26. Print film character field] is used to select the display of area 0 and area 1.

- Specifying Area Size

For the standard size, specify the horizontal and vertical sizes for each area from the [27. Character Area0 (Standard) horizontal size] to [30. Character Area1 (Standard) vertical size] .


horizontal size
horizontal size
vertical size
Area 0
vertical size
Area 1

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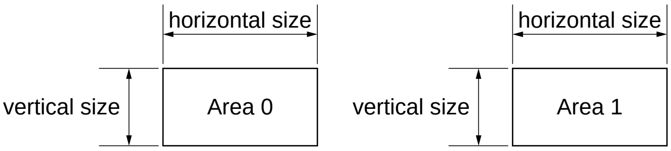
For the large size, specify the horizontal and vertical sizes for each area from the [31. Character Area0 (Large) horizontal size] to [34. Character Area1 (Large) vertical size] .

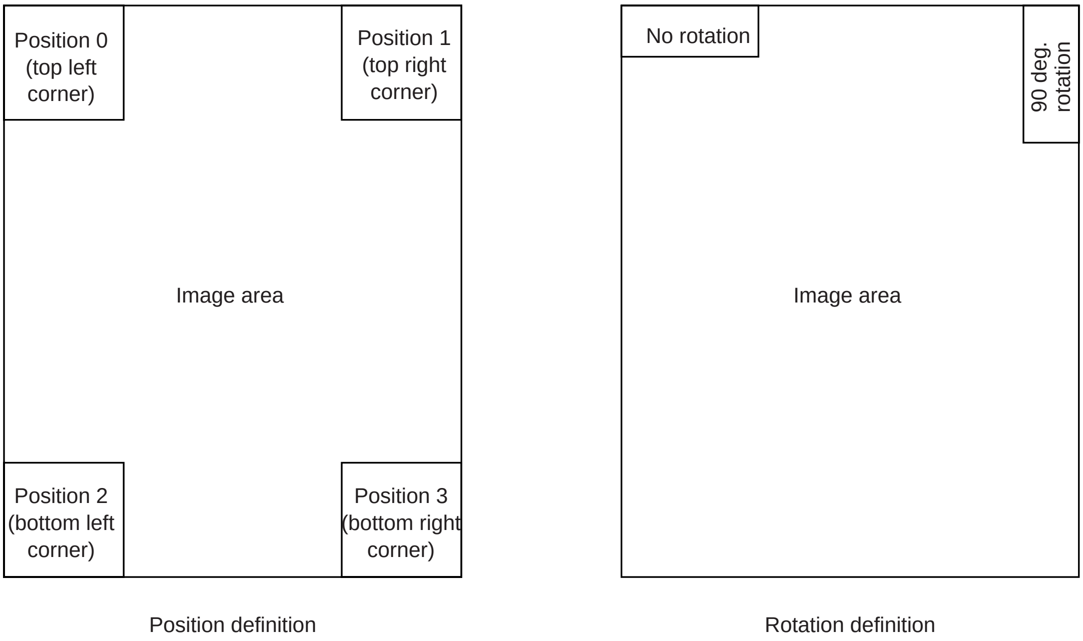

horizontal size
horizontal size
vertical size
Area 0
vertical size
Area 1

FP4G0219.EPS

It is noted that the large size is selectable from the [23. 14*17 single character size of 14*17 film] only when 14" × 17" sized image is output in an equal scaling. For other image output, the standard size is used.

- Defining Area position and rotation

The definition of area position and rotation is represented as shown in the following figure.

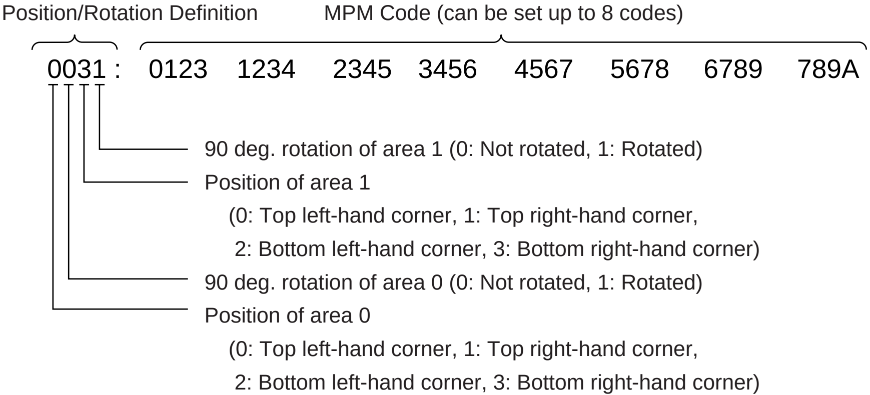

Position 0 (top left corner)
Position 1 (top right corner)
Image area
Position 2 (bottom left corner)
Position 3 (bottom right corner)
Position definition
No rotation
90 deg. rotation
Image area
Rotation definition

FP4G0220.EPS

- Setting Area position and rotation

The [35. 14*17 film character field position & rotation(Default):] is used to set positions of each area (0 and 1) and rotation so that the image is output in each size ([1417:], [1714:], [1843:], [0810:]).

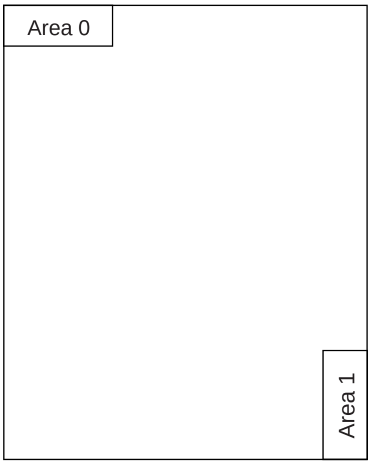
The [36. 14*17 film character fields position & rotation(Specific MPMs):] is used to set the availability of four types ([FC1:] to [FC4:]) of area position and area rotation for a specific MPM code.
For MPM codes that are not set in the [36. 14*17 film character fields position & rotation(Specific MPMs):] , they are output in the normal format (top left-hand corner/no rotation for area 0, top right-hand corner/no rotation for area1).


Position/Rotation Definition
MPM Code (can be set up to 8 codes)
0031 : 0123 1234 2345 3456 4567 5678 6789 789A
90 deg. rotation of area 1 (0: Not rotated, 1: Rotated)
Position of area 1
(0: Top left-hand corner, 1: Top right-hand corner,
2: Bottom left-hand corner, 3: Bottom right-hand corner)
90 deg. rotation of area 0 (0: Not rotated, 1: Rotated)
Position of area 0
(0: Top left-hand corner, 1: Top right-hand corner,
2: Bottom left-hand corner, 3: Bottom right-hand corner)

FP4G0221.EPS

An example of settings :)

[FC1 :] ="0031 : 0123 1234 2345 3456 4567 5678 6789 789A"


Area 0
Area 1

Area 0: Position (top left-hand corner), not rotated
Area 1: Position (bottom right-hand corner), 90 degree rotated

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